

THE RELATIONSHIP OF AFFECTIVE TRAINING CLIMATE OF DOCTORAL  
COUNSELING AND CLINICAL PSYCHOLOGY TRAINING PROGRAMS  
TO STUDENT PSYCHOTHERAPIST AFFECT AND PROFESSIONAL  
DEVELOPMENT

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THE RELATIONSHIP OF AFFECTIVE TRAINING CLIMATE OF DOCTORAL  
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Kacey Jo Wilson

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## VITA

Kacey Jo Wilson, daughter of Colonel Steven M. Wilson and Mrs. Teresa J. Wilson and older sister of Mrs. Kellie Ann Buford, was born on June 15, 1980, in Portsmouth, New Hampshire. She graduated from Eastern Wayne High School in 1998, and was a Chancellor's Scholar at Appalachian State University. She graduated from Appalachian State University's University Honors Program *magna cum laude* with a Bachelor of Science in Psychology (with Departmental Honors) and a Bachelor of Arts in Spanish in May, 2002. She then moved to Auburn, Alabama in August, 2002, to commence her doctoral studies in Counseling Psychology at Auburn University. After successfully completing all required doctoral coursework and taking her written and oral comprehensive examinations, Ms. Wilson completed her predoctoral psychology internship at the University of South Carolina's Counseling and Human Development Center during the 2006-2007 academic year. Ms. Wilson will graduate on August 9, 2008, with her Doctor of Philosophy Degree in Counseling Psychology.

DISSERTATION ABSTRACT

THE RELATIONSHIP OF AFFECTIVE TRAINING CLIMATE OF DOCTORAL  
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DEVELOPMENT

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Doctor of Philosophy, August 9, 2008  
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There is a substantial literature demonstrating that organizational climate is significantly related to various employee outcomes, including employee affect and job satisfaction. The professional literature is lacking, however, in addressing the impact that training climate of doctoral counseling and clinical psychology programs has on student psychotherapist affect and professional development (which is conceptually similar to the job satisfaction construct). The present study examined the predictive power of the affective training climate of doctoral clinical and counseling psychology programs with

respect to student psychotherapist affect and professional development. The sample consisted of 301 doctoral counseling and clinical psychology student psychotherapists from APA-accredited training programs. Participants were required to have completed at least one academic year within their current training program as well as at least one semester of clinical training/experience. Participants completed the “Affective Training Climate Scale,” “The Positive Affect Negative Affect Schedule,” and the “Psychotherapists’ Professional Development Scales.” Regression analyses indicated that the Warmth/Affiliation facet of affective training climate explained a significant amount of the variance in student psychotherapist positive affect and that the Cooperation/Openness facet accounted for a significant proportion of the variance in student psychotherapist negative affect. Regression analyses also indicated that the Cooperation/Openness facet of affective training climate explained a significant amount of the variance in student psychotherapist professional development (i.e., Overall Career Development, Currently Experienced Growth, and Currently Experienced Depletion). These findings are consistent with the numerous empirical findings that document the importance of organizational climate in determining various employee outcomes (including affect and job satisfaction). It is hoped that these findings will illuminate the importance of the assessment of affective training climate of doctoral counseling and clinical psychology programs with respect to enhancing the affective well-being and professional development of doctoral student psychotherapists.

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## I. INTRODUCTION

### *Statement of the Problem*

Psychological researchers have traditionally been interested in the impact that environmental conditions have on the emotional and psychological conditions of individuals. For example, researchers have investigated the impact that components of organizational climate have on individual outcomes of the members (usually employees) within those organizations (i.e., job satisfaction, non-work satisfaction, organizational commitment, job performance, absenteeism and turnover, learning capability, transfer of learning, dysfunctional job behaviors, harassment, workplace violence, employee affect, and psychological and subjective well-being) (Burke, Oberklaid, & Burgess, 2005; Carr, Schmidt, Ford, & DeShon, 2003; Gunter & Furnham, 1996; Johnson & McIntye, 1998; Kirby, Delva, Knapper, & Birtwhistle, 2003; Kozlowski & Hults, 1987; Kozlowski & Salas, 1997; Lindell & Brandt, 2000; Martin & Hine, 2005; Ostroff, 1993; Repetti, 1987; Rouiller & Goldstein, 1993; Schneider, Salvaggio, & Subirats, 2002; Schneider, White, & Paul, 1998; Tracey, Hinkin, Tannenbaum, & Mathieu, 2001; Tracey, Tannenbaum, & Kavanagh, 1995; Tracey & Tews, 2005).

More specifically, there is a substantial literature documenting the impact that affective aspects of workplace climate have on employee affect and job satisfaction (Fisher, 1996 [as cited in Fisher, 2002]; Herzberg, Mausner, & Snyderman, 1959 [as cited in Fisher, 2002]; Miles, Borman, Spector, & Fox, 2002; Niklas & Dormann, 2005). For

example, Miles et al. (2002) found that relational/affective characteristics of work environments were associated with employee affective reactions. For example, disputes with organizational policy and/or administration; the presence of occupational role conflict; interpersonal difficulties with supervisors; and work stressors such as interpersonal conflict with coworkers and minor irritations are associated with employee negative affective reactions at work (Herzberg et al., 1959 [as cited in Fisher, 2002]; Miles et al., 2002). Herrbach (2006) found that higher levels of “affective organizational commitment” (which was posited to occur as a result of the accumulation of positive work experiences) was correlated with increased levels of “positive affective states” of employees. Additionally, Weiss and Cropanzano’s (1996) Affective Events Theory posits that levels of employee job satisfaction are directly impacted by the emotional valence and responses that employees attach and have, respectively, to various workplace events to which they are exposed.

While much attention has been paid within the industrial-organizational psychology literature to the influence of organizational climate on various employee outcomes including affect, well-being, and job satisfaction, virtually none has been paid to the impact of training climate on student psychotherapist affect or professional development (which is akin to the construct of job satisfaction, as will be explained in the following literature review) within doctoral counseling psychology and clinical psychology training programs. Given the substantial amount of research establishing empirical links between workplace climate and outcomes such as employee affect and employee job satisfaction, the current study examined the intuitively parallel

relationships between training climate and student psychotherapist affect and professional development in counseling and clinical psychology doctoral training programs.

Considering that doctoral counseling psychology and clinical psychology training programs are charged with providing training experiences designed to maximally optimize students' development and growth as psychotherapists and future psychologists, it is surprising that there is a lack of research examining the impact that various aspects of doctoral training programs have on student outcomes. More specifically, it is of interest that there is a paucity of research examining the impact that the affective climate of doctoral clinical and counseling psychology training programs has on student psychotherapists given that a significant portion of the training involved in becoming a psychotherapist is focused on the affective health and reactions of both client and psychotherapist.

### *Significance of the Problem*

A fundamental line of inquiry within the discipline of psychology is the extent to which and ways in which the environment impacts, hinders, and/or optimizes human development. A specific variant of this research agenda is the question of how and to what extent organizational climate impacts various individual outcomes. For example, it has been demonstrated that middle school students' perceptions of their school's climate are significant predictors of the extent to which they experience emotional and behavioral difficulties (Kuperminc, Leadbeater, Emmons, & Blatt, 1997).

More specifically, literature abounds within the psychotherapy discipline as to how environmental, contextual, and relational variables might impact mental health

professionals and/or psychologists-in-training within specific contexts (i.e., supervision, didactic courses, internships, mental health service centers) and dyadic relationships (i.e., supervisor-supervisee, mentor-student, professor-student) (Bogat & Redner, 1985; Chen & Bernstein, 2000; Drabman, 1985; Ellis, 1992; Gilbert & Rossman, 1992; Hemmelgarn, Glisson, & James, 2006; Johnson, 2002; Johnson, Stewart, & Brabeck, 2004; Pelletier & Vallerand, 1996; Ragins & Scandura, 1997; Rubin, 1989; Schlosser, Knox, Moskovitz, & Hill, 2003; Stoltenberg, 2005; Tepper, Duffy, & Shaw, 2001). For example, Hemmelgarn et al. (2006) discussed the various ways in which affective aspects of the climate of mental health service centers might impact a variety of outcomes, including the extent to which employees perceive exposing one's clinical work is psychologically safe, which can have a tremendous impact on the quality of services that clinicians within these organizations provide to their clients. Hemmelgarn et al. (2006) also extolled the importance of climate evaluation when attempting to increase the extent to which clinicians within mental health service centers utilize evidence-based treatment interventions. That is, the climates (including social norms and atmosphere) of these organizations have been observed to be instrumental with respect to whether and how clinical innovations are adopted within them.

Additionally, there is a substantial literature that examines both the positive and negative impacts that various environmental, relational, and/or contextual characteristics of psychotherapy supervision have on supervisees. Of particular interest to this researcher is the literature documenting the various ways in which supervisory experiences can negatively impact supervisees, as these experiences (which can be

detrimental to supervisee well-being and professional development) occur within the context of a supervisory relationship as well as a larger academic/departmental/clinical system. For example, Kozłowska, Nunn, and Cousins (1997) found that 50% and 57% of psychiatric supervisees reported experiencing a lack of educational guidance and emotional support from their supervisors, respectively. It was particularly noteworthy that these psychiatric supervisees reported that their experiences of supervisory absence were among the most distressing aspects of their training. In a similar vein, Ellis (2001) defined harmful supervision as consisting of supervisory dynamics and/or interventions that lead to the affective, psychological, and/or physical traumatization of the supervisee. According to Ellis (2001), these harmful interventions (often rooted in various relational and contextual aspects of the supervisory dyad, academic department, and/or clinical setting) can result in the following supervisee outcomes: symptoms of psychological distress and/or trauma; a decline in the ability to effectively perform within academic, clinical, and/or personal contexts; a significant decrease in self-esteem; and/or the deterioration of physical and/or psychological well-being. Of particular salience is Unger's (1999) finding that, when provided with the opportunity to report both positive and negative supervisory experiences, 50% of the supervisees surveyed reported having had distressing supervisory experiences, 15% reported having experienced a traumatic event in supervision, and 7% reported leaving the profession of psychology as a direct and/or indirect result of negative supervision experiences (as cited in Ellis, 2001). There is a clear and vested commitment within the psychological supervision literature to the

exploration and prevention of the dynamics contributing to and the effects of negative supervisory experiences for supervisees.

The psychological literature is lacking, however, in examining the organizational, systemic impact of the doctoral counseling and/or clinical psychology training program as a whole on the affective experiences and professional development of the student. Indeed, Elman, Illfelder-Kaye, and Robiner (2005) assert that the influence of the training climate of graduate psychology programs and the faculty members that comprise them on student professional development (which includes self-awareness, self-reflection, professionalism, coping strategies, personal growth) is largely unacknowledged in the professional literature. Additionally, they assert that student perceptions of the extent to which their graduate training programs encourage and nurture their personal growth and professional development impact many student outcomes such as willingness to disclose and take risks, openness to challenge, ability to engage in learning, proactive coping, and ability to function effectively. Furthermore, these authors call for the development of more professional and institutional initiatives to assist training programs in evaluating and adjusting their training environments in ways that enhance and encourage student professional development.

Additionally, Ducheny, Alletzhauser, Crandell, and Schneider (1997) found that a significant number of psychology graduate students indicated that their training programs nurtured only the most basic and traditional aspects of professional development (e.g., development of a theoretical orientation, coursework in research methods and statistics, and basic training in professional ethics). These authors also found that students

generally felt that their training programs were not nurturing their growth with respect to fostering knowledge about stages of professional development and related difficulties and challenges. Furthermore, psychology graduate students indicated that they wanted more support from their training programs in the following areas: developing skill sets in supervision and mentorship; developing the ability to function professionally in a myriad of manners and contexts; finding and nurturing a mentoring relationship; cultivating their own specific interests and areas of expertise; and encouraging students to develop beneficial interdisciplinary relationships. Additionally, it was demonstrated that counseling and clinical psychology students endorsed interpersonal aspects of professional development as being more important to them than more research- and academically-oriented aspects. These authors encouraged psychology graduate students to reflect on whether their personal and professional development needs are being met within the context of their training programs and how the culture and values of their training programs are impacting this process. Ducheny et al. (1997) recommended that students attempt to better utilize resources within their training programs, request additional resources from their training programs, or make arrangements to have their professional development needs met outside of their programs, if need be.

### *Purpose of the Study*

As previously discussed, the professional literature suggests that organizational climate significantly impacts and/or predicts organizational members' affect and job satisfaction. Therefore, the present study explored the implication of these findings within the context of doctoral clinical and counseling psychology training programs. The

purpose of the present study is in line with the recommendations of the aforementioned authors in that it aims to explore the impact of affective training climate on the outcomes of student psychotherapist positive and negative affect and professional development. A goal of the present study is to enhance understanding of the ways in which graduate counseling and clinical psychology training programs might be better able to enhance the affective and professional development experiences of their student psychotherapists through an evaluation of their own affective climates. The review of the literature that follows is intended to explore the ways in which findings from various other disciplines might be utilized in the service of beginning to understand the largely unacknowledged, but potentially important relationships among affective training climate, student psychotherapist affect and student psychotherapist professional development.

The present study explored the extent to which the affective training climate of doctoral clinical and counseling psychology training programs predicts counseling and clinical psychology doctoral student psychotherapist affect and professional development. The following general hypotheses were explored: (1) affective training climate predicts student psychotherapist affect; and (2) affective training climate predicts student psychotherapist professional development (as operationalized by Orlinksy & Rønnestad's [2005a-e] Overall Career Development, Currently Experienced Growth, and Currently Experienced Depletion subscales). More specifically, the present study explored the following hypotheses: (1a) affective training climate predicts student positive affect; (1b) affective training climate predicts graduate student negative affect; (2a) affective training climate predicts student Overall Career Development;

(2b) affective training climate predicts student Currently Experienced Growth; and (2c) affective training climate predicts student Currently Experienced Depletion (see corresponding Figures 1a-2c).

## II. LITERATURE REVIEW

The impact of the environment on individuals is a basic and fundamental subject of inquiry within the discipline of psychology. It has been long established that the environment influences individual behavior, cognition, affect, and functioning. For years, researchers and theorists have explored the many ways in which the environment is influential. These researchers and theorists have represented numerous and various orientations to the study of human behavior. Behavioral theorists, for example, have extensively investigated the ways in which environmental reinforcement either increases or decreases the probability that an individual will engage in a certain behavior. In a similar vein, object-relational researchers and theorists have explored the impact that an individual's early relational environment has on his or her current level and mode of cognitive, affective, and relational functioning. Similarly, industrial-organizational psychologists have investigated the relationship between environmental or organizational conditions and individual functioning and behavior within organizations.

### *Definition of Climate*

One example of the ways in which environmental impact on the individual has been investigated is the literature on climate. Climate has been investigated by researchers from many disciplines, including business, sociology, education, and psychology. More specifically, several subspecialty areas within the field of psychology have explored various aspects of the impact of climate on individual and group-level

outcomes including industrial-organizational psychology, work psychology, health psychology, positive psychology, and personality and social psychology.

While there are various definitions of climate, it has been broadly accepted that climate is the product of individual perceptions and cognitive appraisals of organizational characteristics such as formal and informal rules, practices, norms, and procedures (Reichers & Schneider, 1990; James & McIntyre, 1996). A specific variant of climate has been termed *psychological climate* in the research literature (Schneider & Reichers, 1983). Climate is conceptualized as being inherently psychological in nature—it is a phenomenological, internal experience that is the result of an individual’s interpretations of external conditions (James & McIntyre, 1996). This necessarily implies that consistent variability will exist between individuals exposed to the same environmental conditions in terms of their perceptions of and therefore reactions to those conditions (James & McIntyre, 1996). That is, climate is a psychological construct that varies across individuals.

Investigators have also been interested in group-level perceptions of climate. These group-level perceptions have been termed *aggregate* or *organizational climate* in the research literature and refer to the extent of agreement existing among individuals exposed to the same environmental conditions (e.g., individuals within the same workplace or organization) with respect to climate perceptions (James & McIntyre, 1996; Schneider & Reichers, 1983). That is, this body of literature examines whether and to what extent individual-level perceptions of climate are similar within the same

organization or group and the effects that these group-level perceptions of climate have on both individual and organizational outcomes.

Another variation concerning terminology and its impact on the direction of research within the climate literature is found in the distinction between specific and molar climate constructs (Carr et al., 2003). The essence of this distinction lies in the “bandwidth” of the foci of these two constructs, which refers to the volume and complexity of information that is to be collected within a specified amount of time (Cronbach & Gleser, 1965; as cited in Carr et al., 2003). Thus, the focus of the molar climate construct is on more global aspects of environment while the specific climate construct allows for exploration of more constricted materializations of the environment (Cronbach & Gleser, 1957; as cited in Carr et al., 2003). This distinction is important because the type of climate construct employed by a researcher should be accurately reflected in the expanse of his/her selected outcome variables. That is, a researcher investigating more global outcomes (e.g., job satisfaction) would be best served by utilizing a wider taxonomy of molar climate constructs (Carr et al., 2003; Ostroff, 1993). On the other hand, a researcher interested in more precise outcomes within a given environment (e.g., hostile behavior) would be best served by directing his/her attention toward investigating perceptions of a specific climate (e.g., climate for hostility) (Carr et al., 2003).

Another distinction that is important to note is the difference between the constructs of “climate” and “culture” (James & McIntyre, 1996). As emphasized earlier, climate refers to an individual’s perceptions and interpretations of a given environment.

Climate, therefore, is a psychological, intra-individual construct. Culture, on the other hand, is an extra-individual construct that refers to the manner in which environmental conditions actually occur. Culture refers to characteristics or aspects of an environment or organization that influence behavior such as organizational norms, procedures, and formal or informal rules or policies (Reichers & Schneider, 1990). Any variations of these characteristics could be considered cultural variables (e.g., organizational policies regarding delegation and decision making procedures) (James & McIntyre, 1996).

Culture serves an important socializing purpose within specific environments or organizations by directly or indirectly encouraging identification with and conformity to accepted norms (James & McIntyre, 1996). In examining the functioning of cultural variables within a given environment, one is searching for an extra-individual explanation (James & McIntyre, 1996).

#### *Outcomes Associated with Climate and/or Work/Training Environment*

It has been repeatedly demonstrated that climate perceptions influence individual outcomes both within and outside workplace and/or training environments. Individual outcomes that have been linked to organizational and/or workplace climate (i.e., individual perceptions of the work environment) include job satisfaction, non-work satisfaction, organizational commitment, job performance, absenteeism and turnover, learning capability, transfer of learning, dysfunctional job behaviors, harassment, workplace violence, employee affect, and psychological and subjective well-being (Burke, Oberklaid, & Burgess, 2005; Carr et al., 2003; Gunter & Furnham, 1996; Johnson & McIntyre, 1998; Kirby, Delva, Knapper, & Birtwhistle, 2003; Kozlowski &

Hults, 1987; Kozlowski & Salas, 1997; Lindell & Brandt, 2000; Martin & Hine, 2005; Ostroff, 1993; Repetti, 1987; Rouiller & Goldstein, 1993; Schneider, Salvaggio, & Subirats, 2002; Schneider, White, & Paul, 1998; Tracey, Hinkin, Tannenbaum, & Mathieu, 2001; Tracey, Tannenbaum, & Kavanagh, 1995; Tracey & Tews, 2005).

It has also been demonstrated that multiple aspects of a training environment impact student outcomes. For example, there is a substantial body of literature on how the stressors of medical school (i.e., financial pressures, heavy workload, competitive training and academic environments, decreased amounts of leisure and free time) impact student outcomes (i.e., decreased physical health, increased negativism, increased depression, and decreased self-esteem) (Guthrie, Black, Shaw, Hamilton, Creed, & Tomenson, 1997; Miller, 1994; Niemi & Vainiomaeki, 1999; Park & Adler, 2003; Stewart, Betson, Lam, Marshall, Lee, & Wong, 1997; Vitaliano, Maiuro, Mitchell, & Russo, 1989; Vitaliano, Maiuro, Russo, & Mitchell, 1989; Wolf, 1994).

Additionally, research demonstrates the significance of support received by psychology doctoral students in their graduate training programs, internship programs, and novel employment environments to their adjustment to their internship and/or postdoctoral experiences (Kaslow & Rice, 1985; Olson, Downing, Heppner, & Pinkney, 1986). In a similar vein, it has been demonstrated within the counseling psychology literature that the climate for research and the quality of research mentoring of counseling psychology doctoral programs and internship training sites impacts student outcomes such as research productivity, attitudes about research, multicultural competence in research, and research self-efficacy (Hollingsworth & Fassinger, 2002; Kahn, 2001;

Krebs, Smither, & Hurley, 1991; Liu, Sheu, & Williams, 2004; Mallinckrodt & Gelso, 2002; Mallinckrodt, Gelso, & Royalty, 1990; Phillips, Szymanski, Ozegovic, & Briggs-Phillips, 2004). Furthermore, research indicates that psychology interns' perceptions of their training have many significant implications for graduate and internship training programs. For example, it was demonstrated that interns' perceptions regarding their training in counseling women, as well as the atmosphere of their graduate training and internship programs (i.e., availability of both male and female supervisors and mentors; availability of faculty or staff members with expertise in women's issues; freedom from sex bias and/or sexual harassment; coverage of women's issues in coursework), suggested areas of inequality between males and females. Of particular interest are apparent discrepancies in perceptions of their experiences in graduate and internship training programs (e.g., women were less likely to feel prepared to counsel women than men; men were more likely to indicate that a faculty/staff member with expertise in women's issues was available; men were more likely to report that they received adequate coverage of women's issues in their coursework; and women were significantly more likely to report being victims of sexual harassment by clinical supervisors and faculty than were men) (Mintz, Rideout, & Bartels, 1994). These differences in perception and reported incidents of victimization raise questions as to the aspects of the training environment (and interns' perceptions of them) that might contribute to these disparities between male and female interns.

In summary, a plethora of research exists that documents the significant impact that organizational, workplace, and/or training environments (and

employee/student/intern perceptions of them—i.e., climate of the various environments) have on numerous individual outcomes. The next sections will outline relevant research findings from organizational psychology related to the impact of organizational climate on employees'/individuals' affect and job satisfaction (which parallels the construct of professional development employed in the present study).

*Affect.* It has been repeatedly demonstrated that features of the organizational/work environment (i.e., individual perceptions of the work environment—“climate”) directly and indirectly impact individual/employee affective reactions, which can in turn impact such outcomes as job satisfaction, affective organizational commitment, organizational citizenship behavior, and counterproductive work behaviors (Fisher, 1996 [as cited in Fisher, 2002]; Herzberg, Mausner, & Snyderman, 1959 [as cited in Fisher, 2002]; Miles, Borman, Spector, & Fox, 2002; Niklas & Dormann, 2002). For example, Weiss and Cropanzano (2005) found that positive and negative state (as opposed to trait) affective reactions (both positive and negative) to perceived work characteristics or events were related to job satisfaction.

Numerous characteristics of the organizational/work environment have been explored in terms of the impact that they have on individual or employee affective reactions. Characteristics commonly mentioned in association with positive affective reactions at work include: experiences of achievement and recognition; opportunities for advancement and growth; the degree to which one is given responsibility; the extent to which one feels stimulated by and interested in one's work; and feeling as though one is in control of workplace situations (Herzberg, Mausner, & Snyderman, 1959 [as cited in

Fisher, 2002]; Miles et al., 2002;). Conversely, work characteristics found to be associated with negative affective reactions at work include: disputes with organizational policy and/or administration; the presence of occupational role conflict; interpersonal difficulties with supervisors; work stressors such as interpersonal conflict with coworkers and minor irritations; and feeling as though one is not in control of workplace situations (Herzberg et al., 1959 [as cited in Fisher, 2002]; Miles et al., 2002).

It has been demonstrated that perceived work characteristics are related to affective reactions at work and job satisfaction. More specifically, Fisher (2002) demonstrated that perceived job characteristics were significantly related to positive affective reactions and that occupational role conflict was related to negative affective reactions. Moreover, Fisher (2002) calls for assessment of both individual/employee affective reactions and job satisfaction as a means to more fully understand individual experiences of their occupation and the impact that workplace climate has on these important employee outcomes.

*Job satisfaction.* The construct of job satisfaction is generally defined as being made up of various attitudes about numerous aspects of one's occupational experience (Spector, 1997). Job satisfaction is comprised of both cognitive and affective components and is empirically distinct from affect as a construct (Weiss & Cropanzano, 1996). The cognitive component of job satisfaction is thought to be comprised of individuals'/employees' weighing their own needs, standards, and/or goals with occupational features (Rice, McFarlin, & Bennett, 1989). Conversely, the affective

component of job satisfaction is thought to be influenced by positive and negative affective feelings experienced in the work environment (Fisher, 2002).

Given that doctoral students' occupational experiences occur primarily within the context of their training program, it seems important to examine the impact of the climate (specifically, affective climate for the purposes of this study) of training programs on the attitudes and feelings of graduate students about their occupation (i.e., psychotherapist-in-training). This section will focus specifically on the impact of organizational climate on reported job satisfaction with an emphasis on establishing the parallels between job satisfaction and student professional development (as defined by Orlinsky and Ronnestad [2005a-e] and as discussed in the professional development section of the current study).

Ronnestad and Orlinsky (2005) emphasized the large impact that interpersonal experiences within the training context (e.g., supervisory, mentoring, client, and peer experiences) have on graduate student development and satisfaction and found that therapists in their study ranked more formal training experiences (e.g., coursework, training seminars, etc.) as being less important to their overall development than the former. Additionally, past research has demonstrated that interpersonal characteristics of organizations including inclusive decision-making, acknowledgement and rewards, supervisory support, instruction, cooperation, emphasis on the client, and the extent to which organizational goals match personal goals are significantly and positively related to job satisfaction (Babin & Boles, 1996; Burke, 1995; Johnson & McIntye, 1998; and Knoop, 1995). Therefore, it would seem intuitive that the affective climate of graduate counseling and clinical psychology doctoral programs (which is concerned with, among

other things, the individual's perceptions of the quality of the interpersonal relationships that comprise the program) might significantly impact graduate student professional development (which is analogous to the construct of job satisfaction). Additionally, Ronnestad and Orlinsky (2005) emphasized the importance of training programs valuing graduate students' perceptions of their own training experiences as much as they value clients' experiences of therapy. Therefore, it would seem appropriate for graduate training programs to elicit feedback from their students as to how the affective climate of their programs are impacting their personal and professional development (i.e., job satisfaction).

Given that job satisfaction is broadly defined as a conglomeration of one's attitudes and feelings related to one's occupational experiences, it seems that the constructs of job satisfaction and professional development parallel one another (i.e., professional development is a construct comprised of one's overall and current affective experiences of and attitudes toward one's occupation as a clinician). More specifically, Orlinsky and Ronnestad (2005) define professional development as consisting of one's overall experience of therapeutic work, including what they call Cumulative Development, Currently Experienced Growth, and Currently Experienced Depletion. Therefore, given that organizational climate has been demonstrated to significantly impact job satisfaction, it would appear that affective climate of graduate psychology training programs would significantly impact student professional development.

### *Classification of Climate Dimensions and Related Outcomes*

Attempts to define and develop models of climate have a long history within the industrial-organizational psychology literature. Initially, there was a trend toward conceptualizing climate as having smaller numbers of relevant dimensions. However, the recent trend has been toward increasingly larger numbers of climate dimensions identified as relevant (Ostroff, Kinicki, & Tamkins, 2003). For example, one of the earliest attempts at developing a dimensional classification system of climate was Campbell, Dunnette, Lawler, and Weick's (1970) literature review resulting in a conceptualization of climate as having four dimensions: individual autonomy, the extent to which structure is emphasized within positions, reward orientation, and consideration, warmth, and support (as cited in Carr et al., 2003).

While these researchers identified only four dimensions of climate, Pritchard and Karasick (1973) posited that climate is comprised of 11 dimensions. These dimensions are as follows: autonomy, conflict versus cooperation, social relations, structure, level of rewards, performance-reward dependency, motivation to achieve, status polarization, flexibility and innovation, decision, centralization, and supportiveness. These researchers empirically linked all of the dimensions except autonomy to job satisfaction. Additionally, they demonstrated that only the dimensions of achievement motivation and levels of reward were correlated with job performance.

Schnake (1983) examined the relationship of five dimensions of climate—reward orientation, structure, warmth and support, standards, and responsibility—to job

satisfaction. It was demonstrated that all five dimensions were positively correlated to each of the measures of job satisfaction used in the study—extrinsic, intrinsic, and social.

Brown and Leigh (1996) investigated the impact of the climate dimensions of management support, clarity, self-expression, contribution, recognition, and challenge on three performance outcomes (extent of technical knowledge, administrative performance, and volume of sales). These researchers demonstrated that the dimensions of perceived contribution and support were significantly correlated with all performance measures while the self-expression and recognition dimensions were unrelated. Additionally, perceived clarity demonstrated a relationship to sales volume, but not to the extent of technical knowledge or administrative performance.

These operationalizations of climate demonstrate the conceptual and definitional variety that has historically permeated the climate literature. While many attempts have been made to link certain climate dimensions to various outcomes, the inconsistent use of terminology in identifying climate domains can result in conceptual overlap between studies and therefore contradictory results (Carr et al., 2003). In an effort to clarify and systematize the existing climate literature, Ostroff (1993) undertook a large study examining the effects of organizational climate and personal variables and their interaction on individual conduct and attitudes. In doing so, she developed a classification or taxonomical scheme of climate based on an extensive literature review that has recently been recognized as being empirically valid, as well as the most comprehensive to date (Carr et al., 2003). This taxonomy will be outlined and explained in the next section.

### *Ostroff's (1993) Taxonomy of Climate Dimensions*

The basic premise on which Ostroff's study is based is that an individual's conduct within a group or organization cannot be separated from an understanding of how contextual characteristics of the organization interact with features of the individuals within it (Pfeffer & Salancik, 1978; Roberts, Hulin, & Rousseau, 1978; Schneider, 1983; as cited by Ostroff, 1993). The Ostroff study was large scale in nature and focused on exploring the impact of both environmental and personal variables, in addition to their interaction, on work outcomes. Generally, the study demonstrated that both environmental (i.e., climate perceptions) and personal (i.e., personal orientations) were significantly related to a variety of outcomes (i.e., satisfaction, commitment, absenteeism, turnover, and adjustment) when examined independently. However, the study provided little support for the notion that person-environment interactions account for a significant amount of the variance in job outcomes.

A defining strength of the Ostroff (1993) study was the comprehensive climate taxonomy that was developed as a result of a large literature review of the various climate dimensions that had been used in previous studies. As noted above, this taxonomy has been recognized as being one of the most comprehensive and empirically valid to date (Carr et al, 2003). This taxonomy is made up of 12 climate dimensions that are organized into three general facets (i.e., affective, cognitive, and instrumental), each of which is comprised of three personality-oriented and one reward-oriented domains (Ostroff, 1993).

Ostroff's (1993) affective facet is primarily focused on interpersonal and social relationships among organization members. The domains that make up this facet include participation, cooperation, warmth, and social rewards. More specifically, the participation domain concerns the extent to which an individual feels involved in decision-making processes and in the establishment of goals and regulations. The cooperative domain examines the extent to which supervisors are viewed as being helpful and perceived levels of support. Additionally, the social rewards domain encompasses the extent to which others' praise is perceived as rewarding, the amount of perceived reward for time and effort put into one's work, and whether competence and effort are formally recognized. Finally, the warmth domain is comprised of individual perceptions of levels of friendliness and informality within organizations and the degree of positive feelings toward one's workgroup (Carr et al., 2003).

The cognitive facet is concerned with the self and the extent of individual involvement in job-related activities. This facet is comprised of the following four domains: growth, innovation, autonomy, and intrinsic rewards. More specifically, the growth domain is comprised of perceived levels challenge and also emphasis placed on self-growth, professional development, and continuous skill and performance improvement. The innovation domain is concerned with the extent to which an individual perceives creativity and innovation as being valued within an organization. Additionally, the autonomy domain surveys individual perceptions of freedom to self-regulate, steer, and have control over one's own work. Finally, the intrinsic rewards

domain is concerned with the extent to which one's abilities and hard work are formally recognized and rewarded (Carr et al., 2003).

Lastly, the instrumental facet is primarily concerned with task involvement and completion. The domains comprising this facet are achievement, hierarchy, structure, and extrinsic rewards. More specifically, the achievement domain focuses on the extent to which an individual feels challenged by his/her work, perceptions of work demand and emphasis placed on continual performance improvement. The hierarchy domain is primarily focused on individual perceptions of the extent to which going through organizational channels and recognition of supervisory authority is emphasized. Additionally, the structure domain assesses individual perceptions of levels of formality and control within the organization, the extent to which the work environment is orderly, and the amount of emphasis placed upon rules, policies, and procedures. Finally, the extrinsic rewards domain is focused on the extent to which an organization offers extrinsic rewards such as increased pay, assignments, and promotions based on competence and effort (Carr et al., 2003; See Table 1).

#### *Applying Ostroff's Taxonomy to Doctoral Counseling and Clinical Psychology Training Programs*

Ostroff's (1993) climate taxonomy has been recognized as the most comprehensive means by which to conceptualize organizational dynamics. The present study focused on the affective facet of the climate taxonomy as it relates to the frequency of students' experiences of positive and negative affect and levels of professional development as outcome variables. The present study adapted the affective facet of the

Ostroff (1993) climate taxonomy and utilized it for the purpose of exploring the hypothesized relationship between the affective climate of doctoral counseling and clinical psychology training programs and the student outcomes of affect and professional development.

*Implications of Lack of Climate Research for Doctoral Counseling and Clinical Psychology Training*

It has been repeatedly demonstrated that organizational climate impacts numerous outcomes including employee affect and job satisfaction. However, there has been a paucity of research within the counseling psychology literature exploring how the training climate of doctoral counseling and clinical psychology programs might impact student affect and professional development. Given that much research has been dedicated within numerous disciplines to exploring how to manipulate environmental conditions to optimize employee well-being and therefore employee outcomes, this study translated that line of reasoning and research into terms that are relevant to the training of doctoral students within counseling and clinical psychology training programs. The next section will explore the constructs of positive and negative affect and the potential relationships they might have to affective training climate.

*Positive and negative affect*

The next section will review relevant literature related to the quality of affective experience and demonstrate how the study of affective training climate as it relates to

Table 1

*Ostroff's (1993) Climate Taxonomy*

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*Affective facet*—quality of interpersonal and communal relationships

- Participation: extent to which an individual feels involved in decision-making processes and in the establishment of objectives and regulations
- Cooperation: extent to which supervisors and colleagues are viewed as being supportive and perceived levels of reciprocal support
- Warmth: perceived levels of camaraderie and cohesion amongst coworkers and the extent to which social groups within organization are perceived as being casual and amicable
- Social Rewards: extent to which others' praise is perceived as rewarding, the amount of perceived reward for time and effort put into one's work, and whether competence and effort are formally recognized

*Cognitive facet*—concerned with the individual and their levels of psychological investment in aspects of their occupation

- Growth: perceived levels of challenge and also emphasis placed on self-growth, professional development, and technical improvement with respect to job-related skills
- Innovation: extent to which an individual perceives flexibility, originality, and inventiveness as being valued within an organization
- Autonomy: individual perceptions of freedom to self-regulate, steer, and manage one's own work
- Intrinsic Rewards: extent to which one's talent and hard work are acknowledged and rewarded

*Instrumental facet*—engagement in work and assignment completion

- Achievement: extent to which an individual feels stimulated by his/her work, perceptions of work load and emphasis placed on constant progress
  - Hierarchy: individual perceptions of the extent to which going through organizational chains of command and recognition of supervisory power is emphasized
  - Structure: individual perceptions of levels of formality and interpersonal openness within the organization, the extent to which the work setting is organized and systematic, and the amount of emphasis placed upon formal policies
  - Extrinsic Rewards: extent to which an organization offers extrinsic rewards such as increased monetary compensation and promotions based on competence and effort
- 

Adapted from: Ostroff (1993); Carr et al. (2003)

student affect might illuminate the various influential processes through which doctoral clinical and counseling psychology training programs impact their students. That is, optimizing student affective experiences through addressing various issues related to affective training climate could move doctoral counseling and clinical psychology training programs toward a long-term goal of producing happier, more well-developed and productive psychologists-in-training. Thus, one purpose of the present study is to explore the impact of the affective facet of training climate on student affective experience. That is, the present study will examine the relationship of students' perceptions of the quality of their affective experiences within their training programs to their reported levels of positive and negative affect.

One area of research in which positive and negative affect are vigorously studied is the well-being literature. It has been repeatedly demonstrated within the well-being literature that positive and negative affect are component parts of the overall construct of well-being (Frijida, 1999). Based on the results of their integrative literature review, Ryan and Deci (2001) concluded that the well-being research could be divided into two areas: one that focuses on contentment (i.e., "hedonic well-being") and one that focuses on human striving and potential (i.e., "eudaimonic well-being"). Keyes, Shmotkin, and Ryff (2002) expanded on this by referring to the two areas as "subjective well-being" and "psychological well-being," respectively, and identifying the domains covered by both of these constructs as having different foci. More specifically, the subjective well-being construct includes both global and domain-specific affective and cognitive judgments about affective experience and quality of life (Keyes et al., 2002; Robbins & Kliever,

2000). Conversely, the construct of psychological well-being focuses more on the extent to which individuals perceive or judge themselves to be thriving in life as a result of effectively navigating and creating meaning out of life's challenges (e.g., striving toward purpose and goal achievement, personal growth and development, forging and maintaining meaningful relationships) (Keyes et al., 2002). While both of these well-being constructs are meaningful and useful in theorizing about the ways in which affective experiences (which are component parts of the more global construct of well-being) of graduate students may be impacted by affective training climate, the present study was more narrowly focused on the relationship of affective training climate to student positive and negative affect (as opposed to more global constructs of well-being). The well-being literature, however, is useful in exploring outcomes related to student affect and affective training climate.

#### *Definition of "Affect"*

The term "affect" has been broadly defined as being comprised of one's pleasurable and painful experiences (i.e., "positive" and "negative" affect, respectively) (Frijida, 1999). Affect can be thought of as having two distinct components: the "phenomenal" and the "functional" (Frijida, 1999). That is, affect can be conceptualized as referring to an individual's experiences of distinctive feelings or can be thought of in terms of its relationship to certain functional behaviors associated with stimulus appraisals such as approach/avoidance, positive and negative behavioral reinforcement, help-seeking, and hindered or enhanced functioning as a result of certain environmental conditions (Frijida, 1999).

It has been demonstrated that behavior is largely organized around the expectation of experiencing positive or negative affect. For example, deciding whether to seek out or avoid a stimulus or whether to exhibit or inhibit a certain behavior are largely dictated by one's expectation of resulting affect. Additionally, anticipation of affect is instrumental in determining whether one continues to remain in or cut off contact with a given stimulus (Frijida, 1999). Furthermore, the experience of positive affect or enjoyment has been associated with increased arousal and openness to stimuli (Davitz, 1969; as cited in Frijida, 1999). In contrast, negative affect has been demonstrated to be related to lowered interest and arousal, except in the case of dealing with the distressing stimulus itself (Davidson, 1992; as cited in Frijida, 1999). It is reasonable to speculate, therefore, that graduate students' phenomenal and functional appraisals, experiences and expectations of affect within the context of their graduate training program are largely impacted by the affective climate of that program. Additionally, it seems apparent that their affective experience, functioning and behavior within the context of the training programs are greatly influenced by the affective climate.

Additionally, research has increasingly demonstrated that positive and negative affect operate largely independently of one another (although this issue is still being debated within the affect literature—for example, some researchers assert that positive and negative affect are bipolar constructs); are associated with distinct brain systems; and are activated by differing varieties of stimuli, events, and circumstances (Ashby, Isen, & Turken, 1999; Cacioppo, Gardner, & Berntson, 1999; Fisher, 2002; Watson, Weise, Vaidya, & Tellegen, 1999; Zautra, Potter, & Reich, 1997). Of particular interest to the

principal researcher in the current study is to explore the impact that varying affective stimuli within doctoral counseling and clinical psychology training programs have on levels of student positive and negative affect (i.e., to attempt to ascertain whether positive and negative affect are associated with differing affective stimuli of doctoral training programs). Furthermore, research findings indicate that the absence or presence of unpleasant events does not necessarily impact positive affect and, vice versa, that the absence or presence of pleasant events does not necessarily impact levels of negative affect (Stallings, Dunham, Gatz, Baker, & Bengston, 1997).

More specifically, these findings have been translated into terms that are meaningful within the work environment (which would be analogous to a graduate student's affective training environment). For example, Weiss and Cropanzano (1996) posit in their "Affective Events Theory" that certain features of the work environment result in the occurrence of certain events in the workplace which are perceived to be either positive or negative, which result in the momentary experience of employee positive or negative affect. Additionally, they suggest that the frequency of experienced positive and negative affect within the work environment is a significant contributor to overall job satisfaction.

#### *Correlates of Positive and Negative Affective Experiences*

Researchers have long been interested in identifying variables that are related to levels and frequencies of individual experiences of positive and negative affect. Qualities demonstrated to be associated with positive affect include: positive self- and other-construals; confidence; self-efficacy; increased optimism; patterns of prosocial behavior;

increased sociability, activity, and energy levels; increased levels of warmth and affiliation; enhanced immunity and physical health; more successful coping with stressors and life challenges; increased openness to the environment; and increased inventiveness and creativity (Lyubomirsky, King, & Diener, 2005). More specifically, Lyubomirsky et al. (2005) conducted a meta-analytic literature review and proposed that the outcomes associated with short-term experiences of positive affect and long-term happiness (the presence of frequent experience of positive affect and infrequent experiences of negative affect) can be broadly divided into six categories: (1) optimistic perceptions of self and others; (2) amiability and activity-level; (3) congeniality and collaboration; (4) prosocial actions; (5) physical health and coping; and (6) problem-solving ability and originality. Intuitively, it would seem that the experience of positive affect within the context of one's graduate training program would be related to the aforementioned outcomes (especially as they relate to Ostroff's (1993) affective climate dimensions of participation, cooperation, and warmth).

Furthermore, the experience of affect has been repeatedly demonstrated to be related to numerous outcomes within the context of the work environment. These outcomes include: job satisfaction; organizational citizenship behaviors; unproductive working behaviors; occupational withdrawal; supervisory evaluations; job performance; employee intentions to quit; emotional burnout; employee health and well-being; and job autonomy and meaning (Cropanzano & Wright, 1999; DeLuga & Mason, 2000; Miles, Borman, Spector, & Fox, 2002; Staw, Sutton, & Pelled, 1994; Van Katwyk, Fox, Spector, & Kelloway, 2000; Weiss, Nicholas, & Daus, 1999; Wright & Cropanzano, 1998; Wright

& Cropanzano, 2000; Wright & Staw, 1999). These research findings lend support to the hypothesis that more positive student perceptions of the affective training climate of their doctoral psychology programs will be associated with increased levels of positive affect in students. Additionally, these research findings suggest that increased levels of positive affect in students may be related to how students function within their roles as doctoral counseling or clinical psychology students.

*The Potential Impact of Affective Training Climate on Student Psychotherapist Affect*

Given that research has repeatedly demonstrated the presence of a relationship between the perceived characteristics and experience of affect in the work environment and numerous outcome variables including employee affect and job satisfaction, it appears probable that a potential relationship exists between affective training climate of doctoral clinical and counseling psychology training programs and levels of positive and negative affect in students. Based on the findings of previous research, it would appear that certain features of the affective climate might impact positive, but not negative affect, and vice versa (a principal area of exploration in the current study). For example, based on previous research, it would be reasonable to posit that perceived interpersonal stress and role conflict within doctoral training programs are related to student negative affect. Conversely, student perceptions related to the extent to which they feel they receive recognition; the extent to which they feel their autonomy is valued; the extent to which their interest and stimulation are valued; and the extent to which they feel their input is valued within their training programs might be related to student positive affect (Fisher, 2002).

*Professional Development as a Potential Outcome of Affective Training Climate*

Development is a pervasive and longstanding topic of interest within the discipline of psychology, as well. Much attention has been devoted to the study and analysis of the human lifespan and associated changes (i.e., physical, psychological, cognitive, emotional, etc.) that occur both within and outside of the individual as he progresses from life's beginning to its end. Understanding these developmental processes and the conditions that affect them is critical in order to optimize human functioning, as well as reduce the probability that dysfunctional or negative outcomes occur.

Development has been a topic of considerable interest for the field of counseling psychology, as well. Counseling psychologists involved in the training of future psychologists and psychotherapists have long recognized that considerable change occurs over the course of psychotherapists careers, from the beginning of formal training (and at times even before that) to the end of their career lifespan. Much attention has been devoted within the literature to understanding these developmental processes (e.g., how consistently they occur across individuals, the nature of the changes, whether the changes occur in a hierarchical or cyclical fashion, etc.), how they occur, and the conditions that influence them, both positively and negatively. The purpose of the current study was to enrich this understanding by exploring the extent to and ways in which student professional development might be optimized or hindered through the influence of affective training climate. Additionally, the present study explored the impact that student affect has on the strength of the hypothesized relationship between affective

training climate and student professional development. This section will briefly address explore the concept and nature of professional development, models within the psychotherapy literature that have been proposed, and the potential impact of affective training climate of graduate training programs and student affect on student professional development.

### *General Overview of Development*

While much diversity exists within the literature as to what should be included within a definition of development, most authors agree that development can be conceptualized as a process that entails movement and change away from a starting point toward an ending point (Santrock, 2004). More specifically, basic features of development include the notion that change of some sort occurs, that this change is organized in a systematic and structured fashion, and that it occurs in sequence (Lerner, 1986; as cited in Skovholt & Rønnestad, 1992). Additionally, some authors have included the following as basic features of development: the transformation is adaptively functional (Schneirly, 1957; as cited in Skovholt & Rønnestad, 1992); that change is ordered in a manner that entails a system moving from a more inclusive, undifferentiated to a more specified, hierarchical, and synthesized state (Kaplan, 1983; as cited in Skovholt & Rønnestad, 1992); and that change occurs both qualitatively and quantitatively (as cited in Skovholt & Rønnestad, 1992).

### *Models of Psychotherapist Professional Development*

There is an extensive literature on therapist/counselor development that includes several proposed models. A basic premise on which most of the proposed models is

based is that levels of professional development increase throughout the career span with the accumulation of age and experience (Skovholt & Ronnestad, 1992). Additionally, it is important to note that, with the exception of the operational definition of professional development being utilized by the current study (based on Orlinsky & Ronnestad's [2005] large-scale empirical study), most of the proposed models are theoretical in nature and, if empirically-based, are generated from qualitative research.

Fleming (1953) (as cited in Skovholt & Rønnestad, 1992) proposed one of the first models of therapist/counselor development. This model primarily emphasizes the different ways in which students process and learn information as they gain experience. Although Fleming (1953) (as cited in Skovholt & Rønnestad, 1992) did not explicitly outline developmental stages through which students progress, she did describe the different types of learning that occur at varying experience levels—imitative learning, corrective learning, and creative learning. Throughout the period in which imitative learning is predominant, the student is primarily engaged in supervisor imitation and the supervisor is largely engaged in teaching and demonstration of skills or techniques while nurturing the student as he moves through this period of uncertainty and anxiety. During corrective learning, the focus is largely on assisting the student in recognizing and correcting mistakes as the student has gained more confidence through experience. Finally, creative learning consists mostly of the fine-tuning of already existing therapeutic skills and style while continuing to stimulate student growth, confidence, and exploration (as cited in Skovholt & Rønnestad, 1992).

One of the first models of therapist/counselor development in which stages were outlined and described was Hogan's (1964) Four-Level Model. According to Skovholt and Rønnestad (1992), this particular model has been the most significant in terms of influencing thinking and research in the area of therapist/counselor development. According to this model, therapists/counselors progress through four stages of development, starting with Level One. During this stage, therapists/counselors are largely lacking in confidence, are very prone toward anxiety, and are quite dependent on their supervisors for support and direction. While often highly motivated to engage in therapeutic work and training, trainees at this stage are often unaware of the reasons for which they decided to enter the field. Typically, trainees predominantly utilize one manner of approaching therapeutic work and learn mostly through imitation. During Level Two, therapists/counselors move toward becoming more independent, but still struggle with issues around dependence on supervision. For trainees at this stage, affect tends to waver between feelings of excessive confidence to feeling inundated with the complexity of therapeutic work. This vacillation often manifests itself in the inconsistency of trainees' motivation at this level. During Level Three, an increased level of confidence in one's own therapeutic abilities and an awareness of the reasons for which one chose the profession are achieved, along with increased and more consistent levels of motivation. The final stage, Level Four, is the stage at which the trainee reaches a level of therapeutic mastery in which a sense of personal independence and security are achieved. Therapists/counselors at this level are often quite aware of their reasons for

choosing the profession and recognize the necessity of acknowledging and addressing both personal and professional issues that might impede their work with clients.

Similarly, Hill, Charles, and Reed (1981) proposed a four-phase model of counseling doctoral student development based on their longitudinal study of twelve counseling psychology doctoral students. The first phase through which students progress is called *Sympathy* and is characterized by an intense focus on compassionate engagement with the client. The main technique utilized during therapeutic interaction with clients at this stage is unwavering positive support and it is often the case that if the client improves, then the trainee feels successful and more confident. During the next phase, *Counselor Stance*, the trainee is heavily focused on mastering one approach to conceptualizing therapeutic work with clients and accompanying interventions or techniques. The third phase, *Transition*, is a developmental period in which trainees begin to question and dismantle their single therapeutic approach based on the receipt of feedback from supervisors, experience with clients, and exposure to research and theory. Finally, the trainee progresses to the final stage, *Integrated Personal Style*, and begins to start constructing a consistent and personalized approach to therapy. At this level, the trainee begins to view client feedback in a more objective fashion than in previous phases.

Loganbill, Hardy, and Delworth (1982) proposed a three-stage model of therapist/counselor (or supervisee, as the authors called it) development. This model proposes that the trainees' developmental trajectories are cyclical; that is, they may move through one of the three stages once only to move through it later at progressively deeper

levels. Additionally, each stage is qualitatively different from the others in terms of its characteristics and worth, as well as the trainees' attitudes toward self, supervisor, and the external world. In the first stage, *Stagnation*, the typical trainee presentation is one of confusion and lack of awareness as to personal weaknesses and relevant issues within supervision. For this reason, the trainee is often "stuck" or stagnant and this manifests itself in dichotomous thinking, a simplistic worldview, low levels of confidence, and dependence upon the supervisor. Alternatively, trainees at this stage might also believe that they are not in need of supervision due to an over-inflated sense of therapeutic or professional success. The second stage, *Confusion*, is characterized by instability, lack of clarity, internal conflict, vacillation, and disruption, all of which are seen as being crucial to the process of moving toward a deeper and more complex sense of professional self. During this stage, trainees' approaches to therapy and the world are challenged in such a way that they begin to experience themselves and others as more complex. As a result, their attitudes become more flexible and they are more able to think, feel, and behave in newer, more spontaneous and creative ways. Typically, trainees often vacillate between feelings of confidence and insecurity that can result in inconsistent attitudes toward their supervisor. Overall, this stage is characterized by intense learning that results in the shedding of older, less flexible ways of relating to self, others, and the world. During stage three, *Integration*, trainees begin to reorganize their approaches to therapy and the world through having achieved a more complex cognitive style, through a more realistic processing of experience in which personal insecurities and shortcomings are acknowledged, and by a continual observation of relevant and salient issues within

therapy and supervision. A movement toward a more realistic and secure acceptance of the self, others, and the world as they are characterizes this stage, which results in more realistic expectations for therapy and supervision.

Blocher (1983) outlined a stage-like model of therapist/counselor development that emphasizes the use of supervision as a means of enhancing and promoting increasingly complex cognitive development in trainees. That is, trainees progress to higher stages or levels of cognitive functioning as therapists through their experiences of a supervisory environment that includes the following seven fundamental components: Challenge, Involvement, Support, Structure, Feedback, Innovations, and Integration. Blocher based his model largely on psychological theories of learning, behavior, and cognitive development. Therefore, primary emphasis in supervision is placed on the development of consistently evolving learning contracts that include specific goals and objectives toward which trainees strive. During earlier developmental stages, learning contracts should focus explicitly on the development of interviewing and conceptualization skills, the ability to establish solid relationships with clients, and the preliminary establishment of a personal sense of security, confidence, and genuineness. Alternatively, the emphasis during the later stages of increased cognitive complexity is on more global issues such as increasing the amount of focus on therapeutic process, elucidation of professional roles and boundaries, and general case management skills.

Grater (1985) proposed a four-stage model of therapist/counselor development that was particularly focused on comprehension of trainee development in order to enhance the quality of clinical supervision. According to Grater (1985), trainees progress

through the following four stages of development: *Developing Basic Skills and Adopting the Therapist Role* (Stage One), *Expanding the Range of Therapy Skills and Roles* (Stage Two), *Using the Working Alliance to Understand the Client's Habitual Patterns* (Stage Three), and *Using the Self in Assessment and Intervention* (Stage Four). During Stage One, the primary emphasis of supervision is placed upon substituting therapeutic responses and behavior for ordinary social responses and behavior. Typically, trainees at this stage struggle with intense levels of anxiety, comprehending the subtleties of client communication, mastering the use of nonverbal communication, and structuring the pace of the clinical interview. Stage Two is characterized by an increased focus on case conceptualization skills and trainees' abilities to delineate between relevant and irrelevant case details, as well as to set therapeutically appropriate process goals for their interactions with clients. An important task for trainees at this stage is increasing levels of therapeutic flexibility. During Stage Three, the trainees' primary learning goal is to recognize the numerous ways in which clients engage in dysfunctional patterns of behavior within the context of the therapeutic relationship and to respond in a manner that produces client development as opposed to lack of growth. Finally, Stage Four is characterized by an increased focus on therapy dynamics and process. The trainees' main task is to develop a sense of how to use themselves as tools for assessment and intervention through increased attention to and understanding of the range and significance of dynamics between client and therapist.

Based on a large-scale review and synthesis of the existing literature on therapist/counselor development, Hess (1987) outlined four stages through which

psychotherapists pass and continually recycle throughout their careers in an ascending, spiral-like manner. In hierarchical order, the stages are as follows: *Inception Stage*, *Skill Development Stage*, *Consolidation Stage*, and *Mutuality Stage*. During the *Inception Stage*, trainees are engaged in learning skills related to appropriate role taking, establishment of boundaries, choosing and implementing interventions, and developing more realistic perspectives about therapy. Next, the *Skill development Stage* is characterized by the development of clinical flexibility in terms of the appropriate selection and implementation of interventions for particular client types and problems. Trainees are also engaged in identity exploration and active exploration of theoretical and philosophical approaches to conceptualizing human nature and psychotherapy. During the next stage, *Consolidation*, the trainees begin to acknowledge and be recognized for their developed skills and talents as therapists while simultaneously striving to improve their therapeutic competence. They are also actively engaged in the process of integrating clinical experience with empirical and theoretical knowledge as they begin to develop a personal sense of their own therapeutic identities. Finally, during the *Mutuality Stage*, the trainees develop a sense of personal autonomy and confidence, engage in reciprocal collegial relationships, cultivate unique and creative solutions to clinical problems, and become actively engaged in preventing personal and professional stagnation and exhaustion.

Additionally, Stoltenberg and Delworth (1987) delineated a four-level model of therapist/counselor development. The first three levels (*Level 1, 2, and 3 Trainee*) are considered student/trainee levels and the last (*Integrated Counselor*) an advanced

practitioner level. According to these authors, the trainees move progressively (via the processes of assimilation and accommodation) through the stages and achieve a permanent level of qualitative distinction at each (although the authors do allow for temporary returns to lower levels of functioning during stressful circumstances). Based on this model, the trainees continually develop in three fundamental areas: awareness of self and others, motivation, and personal and professional autonomy. As the trainees mature in those areas, professional maturity is also achieved at each level across the following eight domains: intervention skills competence, assessment techniques, interpersonal assessment, client conceptualization, individual differences, theoretical orientation, treatment goals and plans, and professional ethics.

Perhaps one of the most comprehensive studies on and conceptualizations of therapist/counselor professional development was that of Skovholt and Rønnestad (1992). Using a qualitative methodology, these authors delineated a model of therapist/counselor development that included the entire span of one's professional career, integrated and acknowledged influential professional and personal factors and figures, was based on research, and produced a wide-ranging body of data relevant to development processes. Based on their findings, the authors outlined an eight-stage model of therapist/counselor professional development that included the following stages: *Conventional, Transition to Professional Training, Imitation of Experts, Conditional Autonomy, Exploration, Integration, Individuation, and Integrity*. For each of the eight stages of professional development, the authors examined development across eight categories: *Definition of the Stage, Central Task, Predominant Affect, Sources of Influence, Role and Working*

*Style, Conceptual Ideas Used, Learning Process, and Measures of Effectiveness and Satisfaction.* Each of the eight stages will now be described in terms of the developmental processes occurring across each of the eight outlined categories in sequence.

*Conventional.* The individuals at this stage are untrained (*Definition of the Stage*) and often find that they are helpful to others by utilizing their innate helping skills and knowledge of human relationships (*Central Task*). The prevailing affect during this stage is sympathy for others (*Predominant Affect*) and the trainees' helping styles are most influenced by their personal experiences (*Sources of Influence*). Trainees often adopt the role of a concerned and sympathetic ally (*Role and Working Style*) and use their natural knowledge as a helping tool (*Conceptual Ideas Used*). Learning is achieved through experience (*Learning Process*) and success/effectiveness are often assumed to be natural outcomes and are not questioned (*Measures of Effectiveness and Satisfaction*).

*Transition to professional training.* This stage spans the first year of graduate training (*Definition of Stage*) and is a period in which trainees are heavily focused on the assimilation and application of large amounts of new information coming from numerous sources (*Central Task*). The trainees' emotional experiences during this stage are mostly comprised of feelings of excitement and uncertainty/anxiety (*Predominant Affect*) due to the often overwhelming manner in which old and novel sources of influence are interacting and challenging them (*Sources of Influence*). This stage is often characterized by role uncertainty and confusion due to the trainees' attempts to integrate academic and practical knowledge (*Role and Working Style*) which lead to a sense of urgency in terms

of learning and understanding conceptualization skills and intervention techniques (*Conceptual Ideas Used*). Trainees at this stage learn primarily through cognitive processing and reflection (*Learning Process*) and base their sense of effectiveness on the level of obvious client progress and supervisor responses (*Measures of Effectiveness and Satisfaction*).

*Imitation of experts.* This stage occurs during the intermediate years of training (*Definition of the Stage*) and is characterized by a focus on remaining open to large-scale theoretical and conceptual systems while simultaneously narrowing down and choosing the types of counseling approaches and interventions to be used in the clinical work of trainees (*Central Task*). Initially, the prevailing emotional experience is one of intense confusion and bafflement at the realization that the trainees' initial approaches to helping are incomplete and largely simplistic. If, however, trainees are able to master the *Central Task* of this stage, the initial confusion often later transforms into a sense of temporary tranquility and confidence (*Predominant Affect*). Trainees at this stage are influenced by a diversity of factors including professors, supervisors, other students, personal life experiences, theory and research, and the social-cultural context (*Sources of Influence*). Some level of role uncertainty and confusion is still present during this stage, but is accompanied by a characteristically concrete, often inflexible development of basic clinical skills (*Role and Working Style*). Trainees at this stage are highly invested in searching for and exploring various conceptual and theoretical systems and intervention techniques (*Conceptual Ideas Used*) and learn primarily through reflection, simulation,

and cognitive processing (*Learning Process*). As in the previous stage, trainees often gauge their clinical effectiveness by supervisor responses and client feedback.

*Conditional autonomy.* Trainees typically enter this stage upon starting their predoctoral internship and remain in this stage for six months to two years (*Definition of Stage*) and are primarily focused on developing their abilities to function professionally and autonomously (*Central Task*). The prevailing emotional experience of trainees during this time is often inconsistent feelings of security and confidence (*Predominant Affect*) and they continue to be influenced by the numerous sources outlined in the previous section (*Sources of Influence*). The clinical roles and working style adopted by individuals at this stage are typically characterized by an increased level of rigidity and conformity, as individuals are intensely aware of the importance of positive supervisory evaluations and feedback with respect to the successful completion of internship (*Role and Working Style*). Trainees' understanding and utilization of theoretical and conceptual approaches and interventions are typically more advanced and sophisticated than in previous stages (*Conceptual Ideas Used*) and their learning processes are predominantly characterized by imitation that utilizes creative and personally-constructed alterations, reflection, and cognitive processing (*Learning Process*). Additionally, trainees' understandings of client progress/feedback and supervisor responses typically become more nuanced and complex (*Measures of Effectiveness and Satisfaction*).

*Exploration.* Individuals typically enter this developmental stage upon graduation from their doctoral programs and remain in it for two to five years (*Definition of Stage*) and are primarily focused on delving into and exploring areas beyond what they already

know (*Central Task*). Security and anxiety often coexist as the prevailing emotions during this period (*Predominant Affect*) and individuals are now exposed to new sources of influence such as a novel occupational setting, new colleagues, and the experience of oneself as a novice professional (*Sources of Influence*). Individuals also work to individualize externally imposed standards of professionalism (*Role and Working Style*). Additionally, individuals engage in self-directed examination of previously utilized conceptual and theoretical constructs and interventions and select those that are perceived as congruent with the emerging sense of personal and professional self (*Conceptual Ideas Used*). Learning takes place primarily through introspection and reflection at this stage (*Learning Process*) and individuals adopt a more realistic conceptualization of the therapeutic process, as well as more internalized professional standards (*Measures of Effectiveness and Satisfaction*).

*Integration.* This stage typically lasts two to five years following *Exploration (Definition of Stage)* and is characterized by an intense focus on developing oneself as an authentic human being and clinician (*Central Task*). Individuals at this stage tend to predominantly experience feelings of fulfillment and optimism (*Predominant Affect*) and are influenced by numerous sources including earlier sources and the experience of themselves as experienced professionals (i.e., “professional elder”; Skovholt & Ronnestad, 1992) (*Sources of Influence*). In terms of *Role and Working Style*, individuals at this stage experience a combination of rigidity imposed by outside sources and a self-directed internal loosening in terms of personal and professional style. Additionally, individuals typically focus on developing a unique and eclectic conceptual/theoretical

approach to clinical work (*Conceptual Ideas Used*) and characteristically develop a personal approach to learning (*Learning Process*). Finally, individuals at this stage come more into touch with the realities and complexities of therapeutic work and continue to internalize professional standards (*Measures of Effectiveness and Satisfaction*).

*Individuation.* This stage encompasses the majority of individuals' professional careers and ranges from ten to thirty years (*Definition of Stage*) and is characterized by a primary focus on deepening previously achieved levels of personal and professional authenticity (*Central Task*). This stage is often predominantly characterized by feelings of tranquil fulfillment, but also distress as a result of monotony or boredom, burnout, and a tendency to question the meaningfulness of clinical work (*Predominant Affect*). The major sources of influence at this stage are experience-based wisdom, intense or especially meaningful experiences with particular clients or types of clients, internalized earlier influences, and the experience of the self as a seasoned and capable professional (*Sources of Influence*). Individuals at this stage are increasingly able to be themselves within the parameters of ethical and competent boundaries (*Role and Working Style*). Additionally, therapists/counselors at this level of professional development utilize an individually relevant and personally meaningful conceptual/theoretical system and therapeutic approach (*Conceptual Ideas Used*) and, as in the previous stage, learn through a highly individualized and self-selected process (*Learning Process*). Finally, individuals at this stage typically evaluate their clinical effectiveness and levels of client satisfaction by internalized and reasonable standards (*Measures of Effectiveness and Satisfaction*).

*Integrity.* This final stage of therapist/counselor development lasts from one to ten years (*Definition of Stage*) and is characterized by a predominant focus on the task of being authentically oneself both personally and professionally, as well as preparation for retirement (*Central Task*). During this stage, the primary emotional experience is typically one of acceptance that is the result of years of professional and personal experience that have cultivated a sense of tranquility, humbleness, and realistic acknowledgement of one's accomplishments and growing edges (*Predominant Affect*). As in the previous stage, the major sources of influence continue to be accumulated experience-based generalizations, internalized earlier influences, and the experience of oneself as a seasoned and accomplished professional elder (*Sources of Influence*). Additionally, one's role assumptions and working style are heavily influenced by a commitment to being authentically oneself within both personal and professional contexts (*Role and Working Style*). To an even greater extent than in the previous stage, individuals' chosen conceptual and theoretical approaches are highly individualized and synthesized (*Conceptual Ideas Used*) and their learning approaches are largely self-directed and personalized (*Learning Process*). Finally, individuals' methods of evaluating their clinical effectiveness and client feedback are intensely reasonable and internally focused (*Measures of Effectiveness and Satisfaction*).

#### *Orlinsky and Rønnestad's Study of Psychotherapist Professional Development*

The present study examined current professional development of psychology doctoral trainee psychotherapists as it is conceptualized and described by Orlinsky and Rønnestad (2005a). Theirs is perhaps the most empirically-based, comprehensive,

definitive and recent study of psychotherapist professional development and was undertaken by the Society for Psychotherapy Research's Collaborative Research Network. This study included nearly 5,000 psychotherapists of varying professional background (e.g., psychology, counseling, social work, medicine, nursing, etc.), theoretical orientation, experience level, gender, age, nationality, marital status, and social status. While the study examined a myriad of factors associated with psychotherapeutic work (e.g., characteristics of psychotherapeutic work, levels and dimensions of psychotherapists' work involvement; patterns of psychotherapeutic work and practice; work and development cycles; translating the findings into the practice of training/supervision and professional work; and implications for future psychotherapy research), the present study focused specifically on and utilized the findings related to current and cumulative professional development as it relates to counseling and clinical psychology doctoral trainee therapists (Orlinsky & Rønnestad, 2005a; Orlinsky & Rønnestad, 2005b; Orlinsky & Rønnestad, 2005c; Orlinsky & Rønnestad, 2005d; Orlinsky & Rønnestad, 2005e; Rønnestad & Orlinsky, 2005a; Rønnestad & Orlinsky, 2005b; Orlinsky et al., 2005f; and Orlinsky et al., 2005g).

Orlinsky & Rønnestad (2005a) operationalize professional development as having two temporal components: Currently Experienced Development and Cumulative Career Development. These two components are both reflexive (i.e., focused on the self) in nature, but differ in terms of temporal focus. That is, the former refers to self-directed, current development while the latter refers to development that is also self-directed, but extended and inclusive of all developmental experiences since the beginning of one's

career. Orlinsky and Rønnestad (2005a) argued that it is necessary to acknowledge and integrate varying temporal foci in order to better comprehend the complexities of determining the amount and types of professional development that have occurred and are occurring. That is, an interaction occurs between one's current and cumulative professional development such that both may evolve over time with the gaining of more developmental experiences.

According to Orlinsky and Rønnestad (2005a), psychotherapist professional development is comprised of three factors (as measured by their *Psychotherapists' Professional Development Scales*, which was utilized to measure professional development in the current study): Overall Career Development, Currently Experienced Growth, and Currently Experienced Depletion. The first factor, Overall Career Development, represents a cumulative temporal focus while the remaining two factors, Currently Experienced Growth and Currently Experienced Depletion, represent a contemporaneous temporal focus. These factors emerged as a result of a factor analysis conducted on the items that make up *The Development of Psychotherapists Common Core Questionnaire* (DPCCQ) (Orlinsky et al., 2005i).

Overall Career Development is concerned with therapists' perceptions of both their development since they first began practicing psychotherapy and their overall experience of their present developmental status. This factor includes the following items related to therapists' perceptions of their professional development since beginning to practice therapy: (1) amount of therapists' experienced change; (2) the extent to which that change is perceived as positive; (3) perceived successfulness related to surpassing

limitations as a therapist; and (4) degree to which one's highest potential as a therapist has been reached. Additionally, this factor is made up of therapists' ratings of their present level of development related to the following items: (5) degree of strategic and technical mastery; (6) ability to understand therapeutic process; (7) ability to handle clients' emotional responses to therapist; (8) ability to utilize personal reactions to clients; (9) degree of exactitude, subtleness, and ease achieved within therapeutic work; and (10) perceived ability to supervise the growth and development of other therapists.

Secondly, the factor of Currently Experienced Growth is concerned with therapists' perceptions of their *present* and *ongoing* development as it relates to the practice of psychotherapy. This factor is made up of the following items: (1) extent to which therapists perceive themselves to be changing; (2) extent to which the change is experienced as positive; (3) perceived success at surpassing limitations as a therapist; (4) degree to which therapists perceive themselves to be improving their therapeutic skills; (5) extent to which therapists feel that their comprehension of therapy is becoming richer; and (6) extent to which therapists experience a deepening excitement about practicing therapy.

Similarly, the Currently Experienced Depletion factor is concerned with therapists' *present* and *ongoing* perceptions of their therapeutic work with respect to the following items: (1) the degree to which therapists view their practice as becoming monotonous; (2) the degree to which therapists experience themselves as struggling to empathize with clients; (3) the extent to which therapists experience themselves as becoming disheartened with the practice of psychotherapy; and (4) the degree to which

therapists sense that their professional performance is worsening or becoming impaired. Lastly, the Motivation to Develop item is related to the importance that therapists assign to their continued development as therapists.

According to Orlinsky and Ronnestad (2005c), several variables were significantly correlated with levels of cumulative and current professional development among psychotherapists. With respect to *Currently Experienced Growth*, these variables, in descending order according to the strength of the correlation, were: “Importance of Further Development” ( $r = .46$ ); “Satisfaction with Therapeutic Work” ( $r = .40$ ); “Work Setting and Support” ( $r = .30$ ); and “Felt Therapeutic Mastery” ( $r = -.25$ ). While all of these variables could be related to the extent to which the affective climate of the doctoral training program fosters growth in these areas, the fact that “Work Setting and Support” was significantly correlated with therapist growth lends specific support to the idea that therapists’ perceptions of their work environment (i.e., climate of training program for trainee psychotherapists) are significantly related to the extent to which they feel enriched by their clinical work. Moreover, therapists with higher levels of satisfaction with their “Work Setting and Support” were less likely to experience *Currently Experienced Depletion*. Therefore, it appears that a more positive perception of one’s main work climate can serve as a buffer against the potential for burnout or depletion.

The present study explored one of the questions posed by Orlinsky et al. (2005h) as it relates to doctoral psychotherapy trainees and the affective climate of their training programs: What types of working environments promote or deteriorate psychotherapist development? In the case of doctoral trainee psychotherapists, it is reasonable to

consider their doctoral training program as one of the most significant working environments (most doctoral trainee psychotherapists spend an average of 10-20 hours weekly at a practicum site, but spend less time at their training site than in their training program) of which they are a part. It seems important, therefore, to explore how their perceptions of the extent to which they are nurtured and supported by their training program (i.e., affective climate) impact their levels of *Overall Career Development*, *Currently Experienced Growth* and *Currently Experienced Depletion* as trainee psychotherapists.

#### *Rationale for the Present Study*

As described above, significant relationships between climate and various individual outcomes, including affect and job satisfaction, have been demonstrated within the literature. The purpose of the present study was to extend this line of research in a manner that is meaningful and useful within the context of doctoral counseling and clinical psychology training programs. Thus, the present study explored the potential impact of affective training climate of doctoral counseling and clinical psychology programs on levels of positive and negative affect in students. Additionally, given that the construct of job satisfaction intuitively appears to parallel the construct of professional development, it seems likely that the climate of graduate training programs might impact student professional development. Therefore, the present study explored the impact that the affective climate of doctoral clinical and counseling psychology training programs has on student professional development (i.e., *Overall Career Development*, *Currently Experienced Growth* and *Currently Experienced Depletion*).

## *Hypotheses*

Several hypotheses were developed and tested in the present study based on the above literature review. The predictor variables (i.e., Participation, Cooperation, and Warmth) were measured using the *Affective Training Climate Scale* (adapted from Ostroff, 1993). The outcome variables, affect and professional development, were measured using the *Positive Affect Negative Affect Schedule* (Watson, Clark, & Tellegen, 1988) and the *Psychotherapists' Professional Development Scales* (Orlinsky & Rønnestad, 2005) (See Figures 1 – 2c for schematic representations of the hypotheses. The hypotheses and the rationales behind their development are presented below. See Table 2 for a survey of research findings linking climate and related variables to outcome variables of interest.

### *Hypothesized Relationships Between Affective Training Climate and Student Affect*

*Hypothesis 1a:* The affective training climate (i.e., Participation, Cooperation, and Warmth) of doctoral clinical and counseling psychology training programs will predict degree of student positive affect. That is, these three predictor variables will account for a significant amount of the variance in student positive affect.

Rationale: Previous research demonstrates that positive affect is negatively correlated with interpersonal conflict, loneliness, job withdrawal, and counterproductive work behaviors, all of which are intuitively related to levels of participation, cooperation, and warmth (Credé, Chernyshenko, Stark, & Dalal, 2005 [as cited in Lyubomirsky, King, & Diener, 2005]; Lee & Ishii-Kuntz, 1987; Van Katwyk, Fox, Spector, & Kelloway, 2000). Additionally, research indicates that positive affect is positively related to

emotional support; support (emotional and concrete) from supervisors; social interactions with extra-familial persons; satisfaction with friends; satisfaction with social activities; levels of affiliation and warmth; levels of social participation and inclusion; job autonomy; and the degree to which one's occupation is meaningful and interesting (Baldassare, Rosenfield, & Rook, 1984; Cooper, Okamura, & Gurka, 1992; Lucas, 2001 [as cited in Lyubomirsky et al.]; Matikka & Ojanen, in press [as cited in Lyubomirsky et al.]; Mirsha, 1992; Staw, Sutton, & Pelled, 1994). Therefore, it was predicted that student perceptions of levels of participation, cooperation, and warmth within doctoral counseling and clinical psychology training programs would predict degree of student positive affect.

*Hypothesis 1b:* The affective training climate (i.e., Participation, Cooperation, and Warmth) will predict degree of student negative affect. That is, these three predictor variables will account for a significant amount of the variance in student negative affect.

Rationale: There is evidence that demonstrates that stressful training and/or academic environments (i.e., medical school) are linked to student outcomes such as increased negativism, increased depression, and decreased self-esteem (Niemi & Vainiomäeki, 1999; Wolf, 1994). Additionally, research suggests that interpersonal stress and role conflict within workplace environments (all of which could impact levels of participation, cooperation, and warmth) are related to employee negative affect (Fisher, 2002). Therefore, it was predicted that student perceptions of levels of participation, cooperation, and warmth within doctoral counseling and clinical psychology training programs would predict degree of student psychotherapist negative

affect and that there would be a negative relationship between the predictors and outcome variables.

*Hypothesized Relationships Between Affective Training Climate and Student Professional Development*

*Hypothesis 2a:* The affective training climate (i.e., Participation, Cooperation, and Warmth) of counseling and clinical psychology training programs will predict degree of student Overall Career Development. That is, these three predictor variables will account for a significant amount of the variance in Overall Career Development.

Rationale: There is a substantial body of research that indicates that individual/employee perceptions of their work environment (i.e., individual psychological climate) have a significant impact on their reported levels of job satisfaction (which is parallel to Orlinsky & Ronnestad's [2005] definition of professional development in that both are broadly defined as being comprised of one's attitudes and/or feelings about his/her occupation). More specifically, research evidence suggests that significant positive relationships exist between the affective facet of climate (i.e., participation, cooperation, and warmth) and individual/employee levels of job satisfaction (Ostroff, Kinicki, & Clark, 2002). Therefore, it was predicted that affective climate of doctoral training programs in counseling and clinical psychology would predict levels of Overall Career Development.

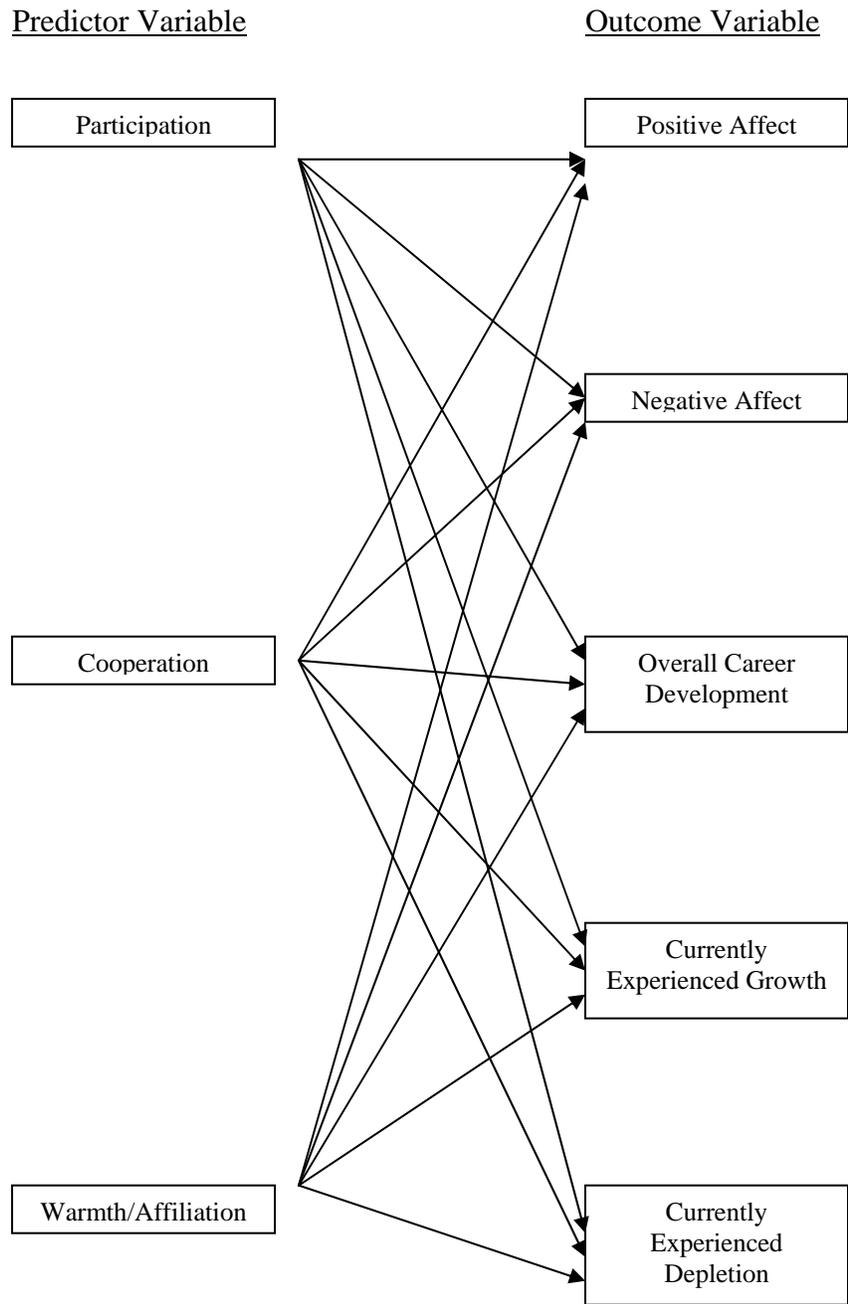
*Hypothesis 2b:* The affective training climate (i.e., Participation, Cooperation, and Warmth) of doctoral clinical and counseling psychology training programs will predict degree of student Currently Experienced Growth. That is, these three predictor

variables will account for a significant amount of the variance in student Currently Experienced Growth.

Rationale: In addition to the aforementioned research supporting the relationship between affective climate and job satisfaction (i.e., psychotherapist professional development), research evidence indicates that “Work Setting Support and Satisfaction” is a minor predictor of psychotherapist Currently Experienced Growth (Orlinsky & Ronnestad, 2005c). Therefore, it was hypothesized that the affective climate of doctoral clinical and counseling psychology training programs would predict degree of student Currently Experienced Growth.

*Hypothesis 2c:* The affective training climate (i.e., Participation, Cooperation, and Warmth) of doctoral counseling and clinical psychology training programs will predict degree of student Currently Experienced Depletion. That is, these three predictor variables will account for a significant amount of the variance in student Currently Experienced Depletion.

Rationale: In addition to the aforementioned research indicating the existence of a significant relationship between affective climate and job satisfaction, Orlinsky and Ronnestad (2005c) demonstrated that therapists with higher levels of satisfaction with their “Work Setting Support and Satisfaction” were less likely to experience Currently Experienced Depletion. Therefore, it was hypothesized that the affective training climate of doctoral counseling and clinical psychology training programs would predict student Currently Experienced Depletion and that the relationship would be negative.

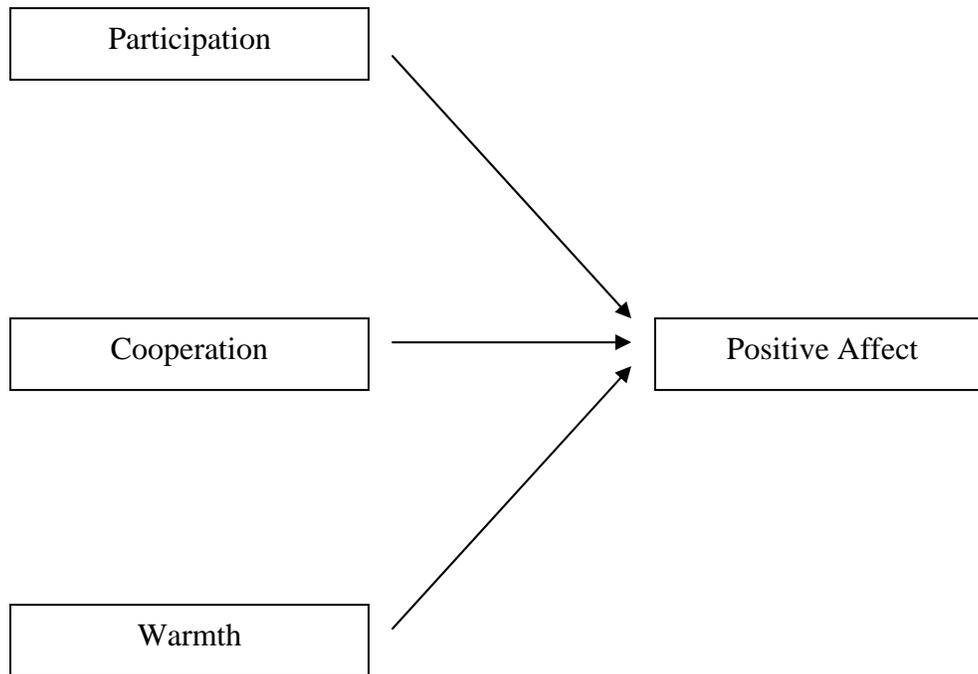


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*Figure 1.* Schematic representation of hypotheses.

Predictor Variable

Outcome Variable

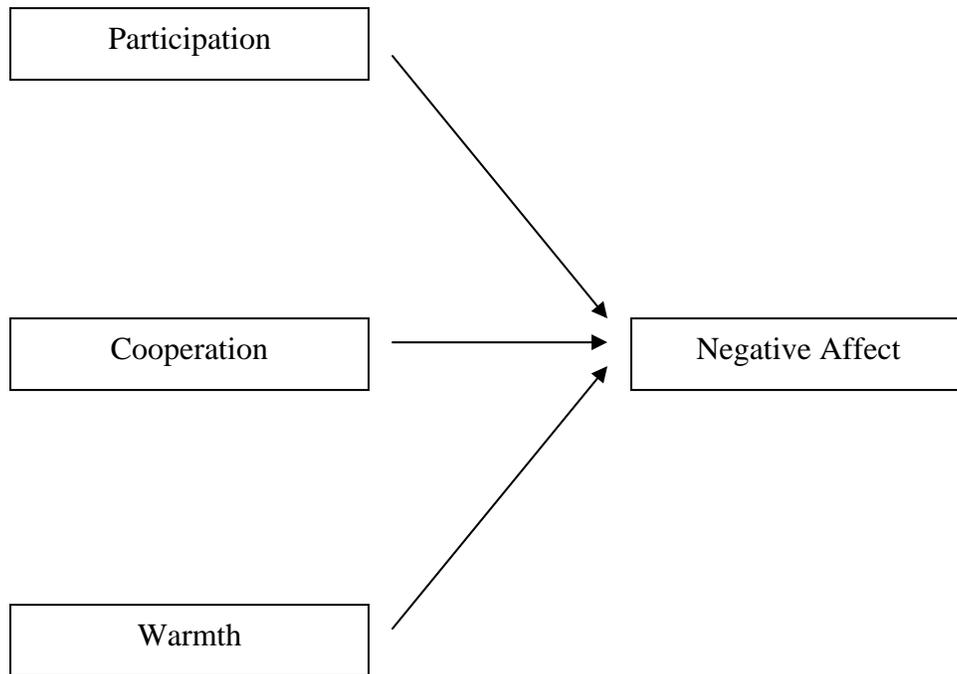


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*Figure 1a.* Schematic representation of Hypotheses 1a.

Predictor Variable

Outcome Variable

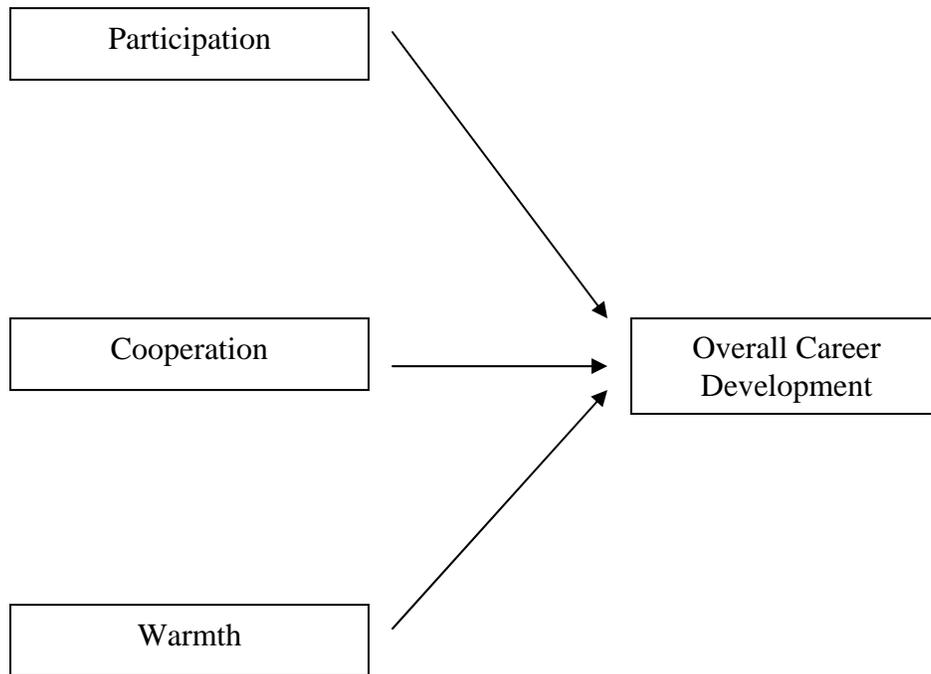


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*Figure 1b.* Schematic representation of Hypothesis 1b.

Predictor Variable

Outcome Variable

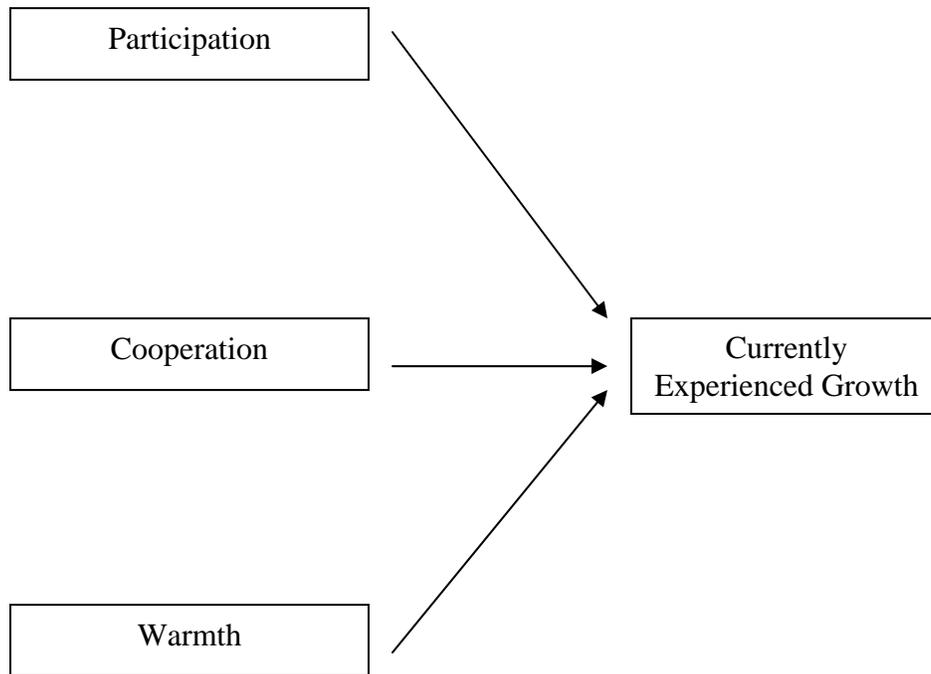


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*Figure 2a.* Schematic representation of Hypothesis 2a.

Predictor Variable

Outcome Variable

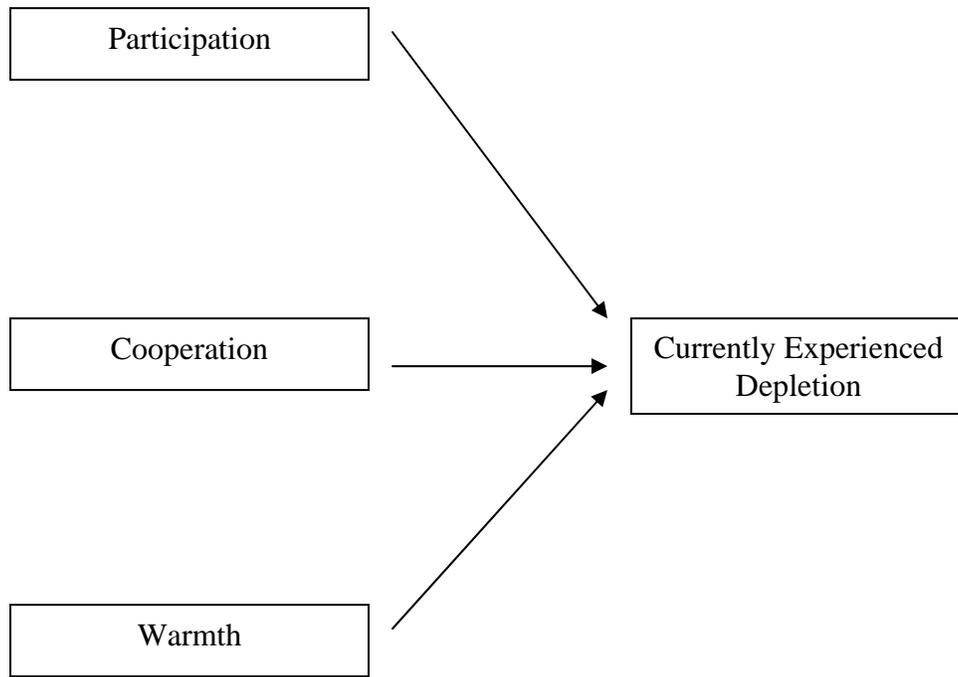


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*Figure 2b.* Schematic representation of Hypothesis 2b.

Predictor Variable

Outcome Variable



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*Figure 2c.* Schematic representation of Hypothesis 2c.

Table 2

*A Survey of Research Findings Linking Climate (and Related Variables) to Outcome Variables of Interest*

<b>Author(s) &amp; Year</b>	<b>Predictor Variable(s)</b>	<b>Dependent Variable(s)</b>
Aarons, G. A., & Sawitzky, A. C. (2006)	<ul style="list-style-type: none"> <li>• Organizational culture</li> <li>• Organizational climate</li> </ul>	<ul style="list-style-type: none"> <li>• Public mental health service providers' attitudes toward adopting evidence-based practice (EBP)</li> </ul>
Acker, G. M. (2004)	<ul style="list-style-type: none"> <li>• Organizational conditions (i.e., role conflict, role ambiguity, opportunities for professional development, and social support)</li> </ul>	<ul style="list-style-type: none"> <li>• Social workers' job satisfaction</li> <li>• Social workers' intention to leave</li> </ul>
Burke, R. J., Oberklaid, F., & Burgess, Z. (2005)	<ul style="list-style-type: none"> <li>• Organizational values regarding work-personal life integration</li> </ul>	<ul style="list-style-type: none"> <li>• Psychologists' job experiences</li> <li>• Psychologists' work and non-work satisfactions</li> <li>• Psychologists' physical and emotional well-being</li> </ul>
Carr, J. Z., Schmidt, A. M., Ford, J. D., & DeShon, R. P. (2003)	<ul style="list-style-type: none"> <li>• Affective climate</li> <li>• Cognitive climate</li> <li>• Instrumental climate</li> </ul>	<ul style="list-style-type: none"> <li>• Job performance</li> <li>• Psychological well-being</li> <li>• Withdrawal</li> <li>• <i>Note: All outcomes were mediated by organizational commitment and job satisfaction</i></li> </ul>
Claudet, J. G. (1999)	<ul style="list-style-type: none"> <li>• Organizational/supervisory climate</li> </ul>	<ul style="list-style-type: none"> <li>• School effectiveness</li> </ul>
DeCotiis, T. A., & Summers, P. S. (1987)	<ul style="list-style-type: none"> <li>• Perceived Structure</li> <li>• Process</li> <li>• Climate</li> <li>• Job Satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>• Organizational commitment</li> </ul>
Hollingsworth, M. A., & Fassinger, R. E. (2002)	<ul style="list-style-type: none"> <li>• Research training environment</li> </ul>	<ul style="list-style-type: none"> <li>• Students' research mentoring experiences</li> <li>• Students' research self-</li> </ul>

		efficacy
Gunter, B., & Furnham, A. (1996)	<ul style="list-style-type: none"> <li>• Climate perceptions</li> </ul>	<ul style="list-style-type: none"> <li>• Job satisfaction</li> <li>• Pride in organization</li> </ul>
Johnstone, A., & Johnston, L. (2005)	<ul style="list-style-type: none"> <li>• Organizational climate (i.e., work pressure, involvement, co-worker cohesion, and supervisor support)</li> </ul>	<ul style="list-style-type: none"> <li>• Work enjoyment (most strongly predicted by co-worker cohesion and supervisor support)</li> <li>• Drive to work (only predicted by work pressure)</li> </ul>
Kahn, J. H. (2001)	<ul style="list-style-type: none"> <li>• Research training environment</li> </ul>	<ul style="list-style-type: none"> <li>• Student scholarly activity (mediated by research interest and research self-efficacy)</li> </ul>
Kirby, J. R., Delva, M. D., Knapper, C., & Birtwhistle, R. V. (2003)	<ul style="list-style-type: none"> <li>• Workplace climate</li> </ul>	<ul style="list-style-type: none"> <li>• Physicians' approaches to work (i.e., "Deep", "Surface-Rational", and "Surface-Disorganized")</li> </ul>
Krebs, P. J., Smither, J. W., & Hurley, R. B. (1991)	<ul style="list-style-type: none"> <li>• Research training environment</li> </ul>	<ul style="list-style-type: none"> <li>• Student research productivity</li> </ul>
Mallinckrodt, B., & Gelso, C. (2002)	<ul style="list-style-type: none"> <li>• Research training environment</li> </ul>	<ul style="list-style-type: none"> <li>• Student research productivity follow-up (15 years after first analysis)</li> </ul>
Mallinckrodt, B., Gelso, C. J., & Royalty, G. M. (1990)	<ul style="list-style-type: none"> <li>• Research training environment</li> </ul>	<ul style="list-style-type: none"> <li>• Student research interest</li> </ul>
Martin, A. J., Jones, E. S., & Callan, V. J. (2005)	<ul style="list-style-type: none"> <li>• Psychological climate</li> </ul>	<ul style="list-style-type: none"> <li>• Change appraisal</li> <li>• Job satisfaction</li> <li>• Psychological well-being</li> <li>• Organizational commitment</li> <li>• Absenteeism</li> <li>• Turnover intentions</li> </ul>
Niemi, P. M., & Vainiomaeki, P. T. (1997); Wolf, T. M. (1994)	<ul style="list-style-type: none"> <li>• Stressors of medical school (including training environment characteristics)</li> </ul>	<ul style="list-style-type: none"> <li>• Student physical health</li> <li>• Student well-being</li> </ul>
Ostroff, C. (1992)	<ul style="list-style-type: none"> <li>• Employee satisfaction</li> <li>• Job-related attitudes (i.e.,</li> </ul>	<ul style="list-style-type: none"> <li>• Organizational performance</li> </ul>

	commitment, adjustment, and psychological stress)	
Ostroff, C. (1993)	<ul style="list-style-type: none"> <li>• Climate (all 12 dimensions)</li> </ul>	<ul style="list-style-type: none"> <li>• Attitudinal commitment</li> <li>• Number of nonrequired hours worked</li> <li>• Employee adjustment</li> <li>• Employee absenteeism</li> </ul>
Phillips, J. C., Szymanski, D. M., Ozegovic, J. J., & Briggs-Phillips, M. (2004)	<ul style="list-style-type: none"> <li>• Internship research training environment</li> </ul>	<ul style="list-style-type: none"> <li>• Intern scholarly productivity</li> </ul>
Repetti, R. L. (1987)	<ul style="list-style-type: none"> <li>• Social environment at work</li> </ul>	<ul style="list-style-type: none"> <li>• Employee mental health (i.e., anxiety, depression, and self-esteem)</li> </ul>
Repetti, R. L. (1991)	<ul style="list-style-type: none"> <li>• Quality of social environment at work</li> </ul>	<ul style="list-style-type: none"> <li>• Individual job satisfaction</li> </ul>
van Dierendonck, D., Haynes, C., Borrill, C., & Stride, C. (2004)	<ul style="list-style-type: none"> <li>• Leadership behavior</li> </ul>	<ul style="list-style-type: none"> <li>• Subordinate well-being</li> </ul>

### III. METHOD

#### *Participants*

Participants in this study were 301 doctoral clinical and counseling psychology students enrolled in American Psychological Association (APA)-accredited doctoral counseling and clinical psychology programs in the United States. The sample was comprised of 48 males (15.9%) and 253 females (84.1 %) with a mean age of 28 years (ranging from 22 to 54 years,  $SD = 4.63$ ). Additionally, the sample was composed of 125 (41.5%) counseling psychology doctoral students and 176 (58.5%) clinical psychology doctoral students with a mean total of years completed equaling 3.25 (ranging from one to seven years,  $SD = 1.72$ ). Of these doctoral students, 290 (96.3%) were enrolled in Ph.D. programs and 11 (3.7%) in Psy.D. programs. In terms of racial and ethnic background, 245 (81.4%) doctoral students identified themselves as Caucasian, 8 (2.7%) identified as African-American, 6 (2.0%) identified as Asian-American, 17 (5.6%) identified as Hispanic-American, 9 (3.0%) identified as International students, and 16 (5.3 %) identified as Other. Only data from participants who had completed at least one academic year and at least one semester of clinical practice in their current training programs was retained for the purposes of the present study.

### *Procedure*

The present study was conducted by survey method over the internet via psychdata.com. The population under study was doctoral counseling and clinical psychology students of APA-accredited doctoral clinical and counseling psychology programs. These participants were chosen as a result of their enrollment in APA-accredited counseling and clinical psychology doctoral training programs. The publicly-accessible membership lists of the Council of Counseling Psychology Training Programs (CCPTP) and the Council for University Directors of Clinical Psychology (CUDCP) websites were used to obtain the e-mail addresses of the training directors of APA-accredited clinical and counseling psychology doctoral training programs. An e-mail introducing the study with an attached research participation request was sent via e-mail to the counseling and clinical psychology training directors. This e-mail requested that they forward the invitation to participate in the present study to the students in their respective training programs. The invitation to potential participants described the present study and its purpose, stated that participation was voluntary, and provided an on-line link to the information sheet and survey. Potential participants were contacted and invited to participate via e-mail one time by the principal investigator via their training directors. Potential participants were also informed that their responses to the survey were secure and anonymous. No names or identifying data were requested or ascertained through the survey. The total length of participation time was estimated and communicated to be 20 minutes.

The website utilized for the surveys in this study was secure and data was retained on a server that had all standard and traditional security measures activated. No participant e-mail addresses were retained in conjunction with their survey responses and therefore no participant data could be matched with e-mail addresses. Participants were informed that their responses were anonymous and that by completing the surveys, they were consenting to participation in the study. No participation rewards were offered.

Once participants completed the surveys, data was retained as a data file on the website to be downloaded and analyzed at a later date. After 301 participants had completed the surveys, data was downloaded into a Microsoft Office Excel file and then transferred into an SPSS data file for analysis. The website was deactivated and removed and data collection terminated.

### *Measures*

*The positive affect negative affect schedule.* The Positive Affect Negative Affect Schedule (PANAS) (Watson et al., 1988) measures the frequency with which an individual experiences positive and negative affect. It consists of 20 items and takes approximately 5-10 minutes to complete (See Appendix B). The PANAS is made up of 20 adjective items each describing an emotional experience (e.g., “nervous,” “enthusiastic,” “distressed,” “excited”). The PANAS allows researchers to choose from seven differing temporal foci (e.g., moment, today, past few days, week, past few weeks, year, or general). For the purposes of the present study, participants were asked to indicate how often they experienced each of the 20 emotion items in general. Participants use a 5-point Likert-type scale to indicate the frequency with which they

experience each emotion from 1 (very slightly or not at all) to 5 (extremely). The two principle mood dimensions indicated in the research literature (positive and negative affect) are included in this scale, with 10 items comprising each subscale. The raw scores for items for each type of affect were totaled to get positive affect and negative affect scores for each participant.

Watson et al. (1988) found one-week test-retest reliabilities of .81 for negative affect and .79 for positive affect. The Positive Affect and Negative Affect subscales had coefficient alpha reliabilities of .88 and .87, respectively.

Additionally, the PANAS was evaluated for factorial validity (principle factor analysis with squared multiple correlations yielded convergent correlations between .85 and .89 and discriminant correlations between -.02 to -.18); item validity (principal factor analysis with squared multiple correlations indicated that positive affect and negative affect accounted for 96.1% of the common variance for the “general” rating); and external validity (the positive affect and negative affect subscales evidenced sufficient correlations with other measures that assessed similar constructs) (Watson et al., 1988). Moreover, the PANAS has been subjected to psychometric evaluation by other researchers and has been found to be a reliable and valid measure of positive affect and negative affect across varying age groups and cultural backgrounds (Crawford & Henry, 2004; Huebner & Dew, 1995; Kawata, 2006; Kercher, 1992; Mackinnon, Jorn et al., 1999; Melvin & Molloy, 2000; Ostir, Smith, Smith, & Ottenbacher, 2004; Terraciano, McCrae, & Costa, 2003; Thompson, 2007; Weidong, Jing, & Schick, 2004).

*The affective training climate scale.* The Affective Training Climate Scale (ATCS) is concerned with measuring the quality of the interpersonal and social environments of doctoral counseling and clinical psychology training programs (adapted from Ostroff, 1993; See Appendix A). It consists of 34 items and is divided into three subscales (“Participation”, “Cooperation/Openness”, and “Warmth/Affiliation”). Items were derived from a review of the climate literature and/or adapted from previous scales. Each of the three subscales assesses a different aspect of affective climate and is comprised of such items as: “The training director has established procedures that involve students in decision-making processes” (“Participation” subscale); “Students provide and utilize the assistance of other students regarding academic matters” (“Cooperation/Openness” subscale); and “There is a lot of warmth in the relationships between faculty and students in this training program” (“Warmth/Affiliation” subscale).

Each of the three subscales previously demonstrated sufficient reliability to be adapted and utilized in the present study. The “Participation” subscale (comprised of seven items in its original format and five items in its adapted format) had a coefficient alpha of 0.85 in its original format (Ostroff, 1993). Additionally, the “Cooperation/Openness” subscale (comprised of 17 items in its original format and 18 items in its adapted format) had a coefficient alpha of 0.87 in its original format (Ostroff, 1993). Finally, the “Warmth/Affiliation” subscale (comprised of 11 items in both its original and adapted formats) had a coefficient alpha of 0.82 in its original format (Ostroff, 1993).

*Psychotherapists' professional development scales.* The Psychotherapists' Professional Development Scales (PPDS) measures the extent to which the respondent has experienced and is currently experiencing professional development as a psychotherapist (Orlinsky & Rønnestad, 2005; See Appendix C). It consists of 22 items and is divided into three subscales ("Overall Career Development", "Currently Experienced Growth", and "Currently Experienced Depletion") and one item assessing "Motivation to Develop". Each of the three subscales assesses a different aspect of professional development and is comprised of items such as: "Since you began working as a therapist...How much have you changed overall as a therapist?" ("Overall Career Development" subscale); "In your recent psychotherapeutic work, how much...Do you feel you are changing as a therapist?" ("Currently Experienced Growth" subscale); and "In your recent psychotherapeutic work...Do you feel you are becoming disillusioned about therapy?" ("Currently Experienced Depletion" subscale). Additionally, one item assesses for "Motivation to Develop" ("How important to you is your further development as a therapist?").

Orlinsky and Rønnestad (2005) found that each of the three subscales had adequate reliability. The "Overall Career Development" subscale (comprised of 10 items) had a coefficient alpha of 0.88. Additionally, the "Currently Experienced Growth" subscale (comprised of six items) had a coefficient alpha of 0.86. Finally, the "Currently Experienced Depletion" subscale (comprised of four items) had a coefficient alpha of 0.69. Additionally, factor analysis and principal-components analysis were utilized and ensured that the instrument evidenced sufficient factorial and item validity.

## IV. RESULTS

### *Overview*

The purpose of this chapter is to present detailed descriptions of the stepwise multiple regression analyses utilized to test the hypotheses of the present study. The first section of this chapter will provide a summary of the descriptive statistics for both the predictor and criterion variables that includes reliability data and analyses for the present study. The final five sections of this chapter will focus on the results of the statistical analyses conducted to examine the five hypotheses discussed in the preceding chapters.

### *Scale statistics for predictor variables*

The predictor (independent) variables in this study were the Affective Training Climate Scale dimensions (as measured by the ATCS): Participation, Cooperation/Openness, and Warmth/Affiliation. Participant responses were based on a 5-point Likert-type scale (0 – 4), with 0 indicating strong disagreement and 4 indicating strong agreement with the item.

The Participation subscale mean was 11.73 with a standard deviation of 4.43. The Cronbach alpha coefficient for the present study's "Participation" scale was .85, which is consistent with the alpha coefficient of .85 reported in Ostroff (1993) (See Table 3 for data comparing scale statistics of the present study to those presented in Ostroff [1993]).

The Cooperation/Openness subscale mean was 49.20 with a standard deviation of 10.61. The Cronbach alpha coefficient for this scale was .91, which is slightly higher than the alpha coefficient of .87 reported in Ostroff (1993) (see Table 3).

The Warmth/Affiliation subscale mean was 29.34 with a standard deviation of 7.71. The Cronbach alpha coefficient for this scale was .90, which is slightly higher than the alpha coefficient of .82 reported in Ostroff (1993) (See Table 3). Due to the high levels of coefficient alpha, the data from the three subscales were considered to be reliable.

#### *Scale statistics for criterion variables*

The criterion (i.e., dependent) variables for the present study were Positive Affect and Negative Affect (as measured by the PANAS) and Overall Career Development, Currently Experienced Growth, and Currently Experienced Depletion (as measured by the Psychotherapists' Professional Development Scales). Scale statistics were calculated for all criterion variables and reported as follows.

The Positive Affect subscale mean was 35.93 ( $SD = 6.96$ ). The Cronbach alpha coefficient for the present study's Positive Affect scale was .89, which is similar to the alpha coefficient of .88 reported in Watson et al. (1988) (See Table 4 for data comparing scale statistics of the present study to those reported by Watson et al. [1988]).

The Negative Affect subscale mean was 19.15 ( $SD = 6.06$ ). The Cronbach alpha coefficient for the present study's Negative Affect scale was .86, which is consistent with the alpha coefficient of .87 reported in Watson et al. (1988) (See Table 4). Due to the

high levels of coefficient alpha on each of the subscales of the PANAS, the data were considered to be reliable.

The Overall Career Development subscale mean was 33.11 ( $SD = 7.66$ ). The Cronbach alpha coefficient for the present study's Overall Career Development scale was .91, which is similar to the alpha coefficient of .88 reported in Orlinsky and Rønnestad (2005) (See Table 5 for data comparing scale statistics of the present study to those reported in Orlinsky and Rønnestad [2005]).

The Currently Experienced Growth subscale mean was 22.63 ( $SD = 5.10$ ). The Cronbach alpha coefficient for the present study's Currently Experienced Growth scale was .90, which is slightly higher than the alpha coefficient of .86 reported in Orlinsky and Rønnestad (2005) (See Table 5).

The Currently Experienced Depletion subscale mean was 3.32 ( $SD = 3.21$ ). The Cronbach alpha coefficient for the present study's Currently Experienced Depletion scale was .71, which is consistent with the alpha coefficient of .69 reported in Orlinsky and Rønnestad (2005) (See Table 5). Due to the moderate to high levels of coefficient alpha on all subscales of the PPDS, the data were considered to be reliable.

### *Hypotheses 1a & 1b*

The following section describes the findings of the stepwise multiple regression analyses used to test Hypothesis 1a, 1b, and 1c. Prior to testing the hypotheses a number of preliminary analyses were conducted to determine the extent to which the underlying assumptions of multiple regression analysis were violated or not by the data.

These preliminary analyses suggested that the results may need to be interpreted with caution (See Appendix G). Also, refer to Table 6 for a correlation matrix of the present study's independent and dependent variables.

*Hypothesis 1a:* The affective training climate (as measured by the Participation, Cooperation/Openness, and Warmth/Affiliation scales of the ATCS) of doctoral clinical and counseling psychology training programs will predict degree of student positive affect (as measured by the Positive Affect subscale of the PANAS). That is, these three predictor variables will account for a significant amount of the variance in student positive affect.

*Results of Analysis of Hypothesis 1a.* Hypothesis 1a was partially supported. As hypothesized, Warmth/Affiliation explained a significant amount of the variance in student psychotherapist Positive Affect with  $R^2 = .175$  and Adjusted  $R^2 = .172$ ,  $F(1, 283) = 59.852$ ,  $p < .001$ . That is, Warmth/Affiliation accounted for 17.2% of the variance in student psychotherapist Positive Affect. However, neither Participation nor Cooperation/Openness were retained within the final regression model as significant predictors of student psychotherapist Positive Affect, with  $t(284) = .829$ ,  $p > .05$ , and  $t(284) = 1.515$ ,  $p > .05$ , respectively. That is, based on the results of this analysis, Warmth/Affiliation was a significant predictor of student psychotherapist Positive Affect. However, neither Participation nor Cooperation/Openness helped explain variance beyond that accounted for by Warmth/Affiliation.

*Hypothesis 1b:* The affective training climate (as measured by the Participation, Warmth/Affiliation, and Cooperation/Openness scales of the ATCS) of doctoral

counseling and clinical psychology training programs will predict degree of student negative affect (as measured by the Negative Affect subscale of the PANAS. That is, these three predictor variables will account for a significant amount of the variance in student psychotherapist Negative Affect.

*Results of Analysis of Hypothesis 1b.* Hypothesis 1b was partially supported. As hypothesized, Cooperation/Openness explained a significant amount of the variance in student psychotherapist Negative Affect with  $R^2 = .134$  and Adjusted  $R^2 = .131$ ,  $F(1, 283) = 43.895$ ,  $p < .001$ . That is, Cooperation/Openness accounted for 13.1% of the variance in student psychotherapist Negative Affect. However, neither Participation nor Warmth/Affiliation were retained within the final regression model as significant predictors of student psychotherapist Negative Affect, with  $t(284) = 1.333$ ,  $p > .05$ , and  $t(284) = -1.503$ ,  $p > .05$ , respectively. That is, based on the results of this analysis, Cooperation/Openness was a significant predictor of student psychotherapist Negative Affect. However, neither Participation nor Warmth/Affiliation helped explain variance beyond that accounted for by Cooperation/Openness.

#### *Hypotheses 2a, 2b, & 2c*

*Hypothesis 2a:* The affective training climate (as measured by the Participation, Cooperation/Openness, and Warmth/Affiliation scales of the ATCS) of counseling and clinical psychology training programs will predict degree of student psychotherapist Overall Career Development (as measured by the Overall Career Development scale of the PPDS). That is, these three predictor variables will account for a significant amount of the variance in Overall Career Development.

*Results of Analysis of Hypothesis 2a.* Hypothesis 2a was partially supported. As hypothesized, Cooperation/Openness explained a significant amount of the variance in student psychotherapist Overall Career Development with  $R^2 = .038$  and Adjusted  $R^2 = .034$ ,  $F(1, 285) = 11.149$ ,  $p < .01$ . That is, Cooperation/Openness accounted for 3.4% of the variance in student psychotherapist Overall Career Development. However, neither Participation nor Warmth/Affiliation were retained within the final regression model as significant predictors of student psychotherapist Overall Career Development, with  $t(286) = -.263$ ,  $p > .05$ , and  $t(286) = .893$ ,  $p > .05$ , respectively. That is, based on the results of this analysis, Cooperation/Openness was a significant predictor of student psychotherapist Overall Career Development. However, neither Participation nor Warmth/Affiliation helped explain variance beyond that accounted for by Cooperation/Openness.

*Hypothesis 2b:* The affective training climate (as measured by the Participation, Cooperation/Openness, and Warmth/Affiliation scales of the ATCS) of doctoral clinical and counseling psychology training programs will predict degree of student psychotherapist Currently Experienced Growth (as measured by the Currently Experienced Growth scale of the PPDS). That is, these three predictor variables will account for a significant amount of the variance in student psychotherapist Currently Experienced Growth.

*Results of Analysis of Hypothesis 2b.* Hypothesis 2b was partially supported. As hypothesized, Cooperation/Openness explained a significant amount of the variance in student psychotherapist Currently Experienced Growth with  $R^2 = .058$  and Adjusted  $R^2 =$

.055,  $F(1, 284) = 17.544, p < .001$ . That is, Cooperation/Openness accounted for 5.5% of the variance in student psychotherapist Currently Experienced Growth. However, neither Participation nor Warmth/Affiliation were retained within the final regression model as significant predictors of student psychotherapist Currently Experienced Growth, with  $t(285) = -.287, p > .05$ , and  $t(285) = -.051, p > .05$ , respectively. That is, based on the results of this analysis, Cooperation/Openness was a significant predictor of student psychotherapist Currently Experienced Growth. However, neither Participation nor Warmth/Affiliation helped explain variance beyond that accounted for by Cooperation/Openness.

*Hypothesis 2c:* The affective training climate (as measured by the Participation, Warmth/Affiliation, and Cooperation/Openness scales of the ATCS) of doctoral counseling and clinical psychology training programs will predict degree of student psychotherapist Currently Experienced Depletion (as measured by the Currently Experienced Depletion scale of the PPDS). That is, these three predictor variables will account for a significant amount of the variance in student psychotherapist Currently Experienced Depletion.

*Results of Analysis of Hypothesis 2c.* Hypothesis 2c was partially supported. As hypothesized, Cooperation/Openness explained a significant amount of the variance in student psychotherapist Currently Experienced Depletion with  $R^2 = .066$  and Adjusted  $R^2 = .063, F(1, 284) = 20.043, p < .001$ . That is, Cooperation/Openness accounted for 6.3% of the variance in student psychotherapist Currently Experienced Depletion. However, neither Participation nor Warmth/Affiliation were retained within the final regression

model as significant predictors of student psychotherapist Currently Experienced Depletion, with  $t(285) = .725$ ,  $p > .05$ , and  $t(285) = .119$ ,  $p > .05$ , respectively. That is, based on the results of this analysis, Cooperation/Openness was a significant predictor of student psychotherapist Currently Experienced Depletion. However, neither Participation nor Warmth/Affiliation helped explain variance beyond that accounted for by Cooperation/Openness.

## V. DISCUSSION

### *Meaning and Interpretation of the Findings*

The present study sought to examine the predictive power of the affective training climate of doctoral clinical and counseling psychology programs with respect to student psychotherapist affect and professional development. The sample consisted of 301 doctoral counseling and clinical psychology student psychotherapists from APA-accredited training programs. Participants completed the “Affective Training Climate Scale,” “The Positive Affect Negative Affect Schedule,” and the “Psychotherapists’ Professional Development Scales.” Regression analyses indicated that the Warmth/Affiliation facet of affective training climate explained a significant amount of the variance in student psychotherapist positive affect and that the Cooperation/Openness accounted a significant amount of the variance in student psychotherapist negative affect. Regression analyses also indicated that the Cooperation/Openness facet of affective training climate explained a significant amount of the variance in student psychotherapist professional development (i.e., Overall Career Development, Currently Experienced Growth, and Currently Experienced Depletion).

The following sections provide a context in which the findings of the present study might be interpreted. The findings and their possible interpretations are presented in a sequential manner, from Hypothesis 1a to Hypothesis 2c. Subsequent sections

address the extent to which the goals of the present study were met, as well as its limitations.

*Hypothesis 1a.* Warmth/Affiliation emerged as the most statistically significant predictor of student psychotherapist Positive Affect. Neither Participation nor Cooperation/Openness explained variance beyond that accounted for by Warmth/Affiliation.

A possible interpretation of the finding that Participation did not emerge as a significant predictor of student psychotherapist Positive Affect is that student psychotherapists might value the Warmth/Affiliation dimension of affective training climate more than the participatory aspects. The items that made up the Participation dimension of the ATCS largely assessed the extent to which student psychotherapists perceived that they were involved in the administrative structuring and functioning of their training programs. Perhaps student psychotherapists, due to their novice status and therefore relative inexperience within the psychotherapy profession, understand the importance of and/or welcome more experienced faculty making critical decisions about the structure of their training and the administrative functioning of their training programs. Given that student psychotherapists might expect and perhaps even desire the guidance of their professional elders in structuring their training, it appears plausible that the extent to which student psychotherapists are involved administratively within in their training programs would have little to bear on the frequency with which they experience Positive Affect.

In a similar vein, the Cooperation/Openness dimension is largely concerned with the extent to which student psychotherapists feel supported and helped by their faculty and peers with respect to the development of their academic and/or clinical skills. Given that this dimension is more focused on feeling a concrete, skill-oriented sense of support from faculty and peers, it appears plausible that this dimension would have significantly less of an impact on student psychotherapist Positive Affect than would the more emotionally salient aspects captured by the Warmth/Affiliation dimension.

Conversely, the Warmth/Affiliation dimension was primarily concerned with the quality of the interpersonal relationships between faculty and student psychotherapists as well as the student psychotherapists with one another. Given the robust amount of research demonstrating a significant relationship between the emotional quality of social/interpersonal relationships and positive affect, it is not surprising that Warmth/Affiliation (i.e., the extent to which faculty and student psychotherapists care about one another; the extent to which students feel that a “sense of family” exists within their training programs; etc.) would emerge as a significant predictor of student psychotherapist Positive Affect (Baldassare, Rosenfield, & Rook, 1984; Cooper, Okamura, & Gurka, 1992; Lucas, 2001 [as cited in Lyubomirsky et al., 2005]; Matikka & Ojanen, in press [as cited in Lyubomirsky et al., 2005]; Mirsha, 1992; Staw, Sutton, & Pelled, 1994). Perhaps the extent to which student psychotherapists develop a sense of belonging, emotional consistency, and mutual caring with their faculty members and fellow students serves as a buffer against the inherently ambiguous nature of their clinical training, which might often leave them feeling vulnerable and/or incompetent (Pica,

1998). The awareness that others within their training program (faculty members and other students alike) value them not only for their clinical and/or academic skills, but as inherently valuable human beings, might have much the same therapeutic impact on student psychotherapists that these conditions have on the clients that they serve.

*Hypothesis 1b.* Cooperation/Openness was the only variable retained in the final regression equation as a significant predictor of student psychotherapist Negative Affect. As evidenced by the negative correlation between Cooperation/Openness and student psychotherapist Negative Affect, the more that student psychotherapists felt the presence of high levels of Cooperation/Openness within their training programs, the less likely they were to experience Negative Affect. Neither Participation nor Warmth/Affiliation were retained as significant predictors of student psychotherapist Negative Affect.

Given that negative affect is associated with high levels of stress, dysfunctional coping styles, and dissatisfying engagement with the surrounding environment, it seems to follow that higher levels of prosocial interacting, coping, and asking for assistance within one's training program (as reflected by the Cooperation/Openness dimension of affective training climate) would be predictive of lower levels of student psychotherapist Negative Affect (Clark & Watson, 1986 [as cited in Watson et al., 1988]; Kanner, Coyne, Schaefer, & Lazarus, 1981 [as cited in Watson et al., 1988]; Wills, 1986 [as cited in Watson et al., 1988]). Although Warmth/Affiliation was not retained in the final regression equation, it did evidence a moderate negative correlation ( $r = -.34$ ) with student psychotherapist Negative Affect. This might suggest, for example, that the team-oriented, prosocial interaction and coping styles present within a training climate with

high levels of perceived Cooperation/Openness serve as more powerful buffers against the qualities that characterize the experience of negative affect (which are most closely theoretically linked to the dynamics captured by the Cooperation/Openness dimension) than do the more emotionally-weighted interpersonal aspects of Warmth/Affiliation. Finally, perhaps Participation would not be a significant predictor of student psychotherapist Negative Affect because student psychotherapists might not attach significant amounts of emotional valence to their levels of involvement (for the same reasons described in the preceding section) in decisions regarding the administrative structuring and/or functioning of their training programs.

*Hypothesis 2a.* Hypothesis 2a was supported, with Cooperation/Openness accounting for 3.4% of the variance in student psychotherapist Overall Career Development. Neither Participation nor Warmth/Affiliation emerged as significant predictors of student psychotherapist Overall Career Development.

Although Cooperation/Openness explained a relatively small proportion of the variance in student psychotherapist Overall Career Development, it perhaps hints at the importance that novice psychotherapists attribute to the technical, skill-oriented aspects of their training program. This would be consistent with characteristics typically attributed to novice psychotherapists with respect to their professional development (i.e., much more concerned with the concrete and technical aspects of psychotherapy).

Also, given that the temporal frame that participants were asked to consider (i.e., “*Since* you began working as a therapist...” and “Overall, at the *present* time”) was relatively short in comparison with what it would be if they were more experienced, it is

perhaps not surprising that the sampled participants might have had limited experience with which to judge their overall levels of skill development and progress as psychotherapists. Furthermore, it is possible that cumulative professional development (i.e., Overall Career Development) is impacted by aspects and/or dynamics of the clinical training climate that the Participation and Warmth/Affiliation climate dimensions do not capture (Orlinsky & Rønnestad, 2005; Ostroff, 1993). Likewise, it is possible that the Cognitive or Instrumental facets of training climate might be more significant for student psychotherapists' cumulative professional development than the Affective (Ostroff, 1993). For example, it might be the case that the Growth, Innovation, and Autonomy dimensions of the Cognitive facet (which is concerned with one's level of investment and involvement in job-related activities) of training climate are more salient with respect to one's sense of cumulative development as a psychotherapist (Ostroff, 1993).

*Hypothesis 2b.* As hypothesized, Cooperation/Openness emerged as a significant predictor of student psychotherapist Currently Experienced Growth, explaining 3% of the variance. Neither Participation nor Warmth/Affiliation were retained as significant predictors in the final regression equation.

Again, it is possible that, due to the early developmental levels of the student psychotherapists sampled, their main focus is on the acquisition of concrete, technical knowledge and skill. As Skovholt and Rønnestad (1992) theorized, novice psychotherapists often fixate on the concrete aspects of psychotherapeutic practice as a way to decrease the anxiety that their inexperience and the inherent ambiguity of therapy produces in them. Therefore, it would seem likely that the cognitive, technical support

(consistent with the aspects of climate that comprise the Cooperation/Openness dimension) that they receive from their supervisors and professional peers is of the utmost importance (perhaps more so than the Participation and Warmth/Affiliation dimensions) to them during the early stages of their professional development as psychotherapists.

*Hypothesis 2c.* Cooperation/Openness emerged as the only significant predictor of student psychotherapist Currently Experienced Depletion. Contrary to Hypothesis 2c, neither Participation nor Warmth/Affiliation explained a significant amount of the variance in student psychotherapist Currently Experienced Depletion.

Perhaps the Cooperation/Openness dimension emerged as the only significant predictor of student psychotherapist Currently Experienced Depletion (in the negative direction) due to the heavy emphasis placed on the extent to which faculty members (i.e., clinical supervisors) and other student psychotherapists within one's training program are viewed as being helpful and productively involved in one's acquisition of knowledge and skills. It goes without saying that the extent to which student psychotherapists view their supervisors and peers as being helpful and knowledgeable might mitigate against the inevitable uncertainty and anxiety that accompany clinical training (Pica, 1998). If student psychotherapists feel that they are unable to rely on their supervisors and/or peers for technical support and instruction, it seems to follow that they are perhaps more susceptible to experiencing a sense of stagnation or decline as a clinician (as captured by the *Currently Experienced Depletion* subscale). As noted above, novice student psychotherapists are likely to be at a point in their professional development in which

their anxiety about their skill level as therapists leads them to be primarily concerned with the concrete, cognitive, and more technical aspects of clinical work (Skovholt & Rønnestad, 1992). It is likely that this professional uncertainty and concern with their skill as psychotherapists makes them less attuned to the more emotionally-focused, interpersonal aspects of their relationships with their supervisors and peers.

*Implications for Doctoral Counseling and Clinical Psychology Training Programs and Future Research*

The overall goal of this dissertation study was to examine the extent to which the affective training climate of doctoral counseling and clinical psychology training programs predicts student psychotherapist affect and professional development. More specifically, this study explored the extent to which each of the dimensions making up affective training climate (i.e., Participation, Cooperation, and Warmth) predicted student psychotherapist Positive Affect, Negative Affect, Overall Career Development, Currently Experienced Growth, and Currently Experienced Depletion.

The findings of the present study suggest that the dimensions of affective training climate of counseling and clinical psychology doctoral training programs are significantly associated with student psychotherapist affect and professional development. More specifically, it appears that the affective dimensions of Warmth/Affiliation and Cooperation/Openness are significant predictors of student psychotherapist affect. Additionally, it was demonstrated that Cooperation/Openness explained a significant (although less substantial) amount of the variance on all indices of student psychotherapist professional development (i.e., Overall Career Development, Currently

Experienced Growth, and Currently Experienced Depletion). This clearly substantiates the level of importance that novice student psychotherapists attach to the helpfulness and technical (i.e., academic and skill-oriented) support available to them from faculty and peers within their doctoral training programs.

Given that doctoral counseling and clinical psychology training programs are charged with producing the most effective and well-developed clinicians possible, perhaps the assessment of the affective training climate of individual programs would be a viable method by which faculty and administrators could seek to improve the climate conditions, and therefore student psychotherapist emotional health and professional development, of their respective programs. Perhaps student psychotherapists would view this effort as their training programs acknowledging the significant impact that their affective experience within the training program might have on their emotional well-being and professional development. This effort on the part of their training programs might validate and/or mitigate against the inevitable anxiety and vulnerability that student psychotherapists will experience during the course of their clinical training.

More specifically, training programs might attend to several group processes (which are associated with levels of interpersonal warmth and cooperation/openness) as potential means through which they could positively impact student psychotherapist affect and professional development. These processes/considerations include: social interdependence orientations/goal configurations (i.e., competitive, individualistic, or cooperative) of individual students and relevant groups of students (e.g., cohorts, training programs, and/or departments); group cohesion; reward structures within groups; and

levels of commitment to the group (Johnson & Johnson, 1994). Each of these processes will be discussed briefly in the context of their potential utility for increasing levels of interpersonal connectedness and cooperation among student psychotherapists and faculty within clinical and counseling psychology doctoral training programs in the following paragraphs.

For example, social interdependence theory focuses on the extent to which the behavior of other people impacts varying aspects of an individual's life (Johnson & Johnson, 1994). Research has demonstrated that social interdependence orientations among groups of individuals fall into one of three categories: cooperative, competitive, or individualistic (Deutsch, 1962; Johnson & Johnson, 1989; as cited in Johnson & Johnson, 1994). A cooperative social interdependence orientation is characterized by group members striving to achieve goals that are beneficial for both themselves and their fellow group members and their recognizing that individual accomplishment is dependent on group accomplishment (Johnson & Johnson, 1994). Conversely, a competitive social interdependence orientation is characterized by group members feeling as though they are only able to attain their individual goals if others in the group are unable to achieve theirs (Johnson & Johnson, 1994). Finally, an individualistic social interdependence orientation exists when group members do not acknowledge a connection between their individual goal attainments and the goal attainment of the group (Johnson & Johnson, 1994).

Consistent with the findings of the present study, higher levels of cooperative interaction in the service of accomplishing a group-oriented goal tend to result in elevated levels of effort, goal attainment, and productivity from the group (Johnson & Johnson,

1989; as cited in Johnson & Johnson, 1994). That is, the present study demonstrated that increased levels of cooperative interaction among student psychotherapists and faculty of doctoral counseling and clinical psychology training programs are predictive of student psychotherapist professional development. Additionally, cooperative interaction has been demonstrated to be associated with the quality of the interpersonal relationships among group members, as well as the group members' level of emotional health and interpersonal skill (Johnson & Johnson, 1989; as cited in Johnson & Johnson, 1994). This finding is also consistent with the finding of the present study that cooperative interaction in training programs is predictive of student psychotherapist affect. It also suggests that a reciprocal relationship may exist between levels of Warmth/Affiliation and Cooperation/Openness.

Johnson and Johnson (1994) offer several suggestions for cultivating a culture of connected and cooperative interaction between group members that might be of special interest to faculty and administrators of doctoral counseling and clinical psychology training programs. First, educating student psychotherapists about the well-documented benefits of cooperative interaction within their group (as well as with faculty) might serve to increase awareness of their importance to one another with respect to their professional development. Groups of student psychotherapists might benefit from an assessment and subsequent discussion of each individual member's and the group's overall social interdependence orientations (see Johnson and Johnson [1994] for an example of a social interdependence assessment). This might serve as a buffer that would allow for future

process-oriented discussions of impediments to cooperative interaction among student psychotherapists/group members.

Additionally, since lack of clarity of group goals often results in increased levels of tension, distraction, and productivity amongst group members, special attention might be paid to assisting groups of student psychotherapists in the development of clear goals to which they are committed (Johnson & Johnson, 1994). According to Johnson and Johnson (1994), group members are more likely to be committed to group goals to the extent that those goals are attractive, achievable, appropriately demanding, and are developed by the group members themselves. The extent to which group members are cohesive, anticipate a positive outcome as a result of goal accomplishment, and enjoy their interaction with one another in the process of achieving the group goal are also significant factors in the development of cultivating commitment to group goals.

Cooperative and connected interactions among groups of student psychotherapists might also be increased by faculty attending to the establishment of group cohesion. Research demonstrates that higher levels of group cohesion are associated with the following: increased levels of member participation; higher levels of group members' commitment to group goals; decreased levels of absenteeism and drop outs; increased adherence to group standards; increased devotion to the group; increased group productivity and task completion; increased frequency of skilled and warm interaction amongst group members; increased levels of security and self-worth for group members; and an increased acceptance of and willingness to work through conflict within the group (Johnson & Johnson, 1994). Faculty might be able to assist groups of student

psychotherapists to increase group cohesion by emphasizing the importance of an agreed-upon system of reward allocation within the group; equal assignment of work amongst members; and equal access to important resources and information within the group (Johnson & Johnson, 1994).

#### *Limitations of the Present Study*

*Multicollinearity.* The high intercorrelations among the predictor variables (i.e., Participation, Cooperation/Openness, and Warmth/Affiliation) suggest that multicollinearity was a problematic issue within the present study. High levels of multicollinearity between predictor variables often result in an underrepresentation of the amount of variance that they are able to explain in the outcome variables. Therefore, it is likely that the predictive power of each of the independent variables in this study (i.e., Participation, Cooperation/Openness, and Warmth/Affiliation) was underestimated. A substantial amount of confidence in the results is warranted, however, given that the proportions of explained variance in the outcome variables (attributable to the predictor variables) were statistically conservative figures.

The presence of multicollinearity calls into question the amount of discriminant validity that exists between the predictor variables. That is, it is quite possible that the three predictor variables in this study are measuring one large construct (i.e., affective training climate) as opposed to unique dimensions of that larger construct. Given that the scale used to assess affective training climate was adapted, it is possible that the purity of the original items was not retained in the translation of those items into the adapted items. It would be of particular interest to assess the factorial structure of the adapted instrument

in order to determine if it is in fact comprised of three factors/subscales (each representing a dimension of affective training climate) or if it would be more statistically appropriate to collapse the items into one measure.

Another interesting finding related to multicollinearity is the discrepancy between the intercorrelations of the predictor variables (i.e., Participation, Cooperation/Openness, and Warmth/Affiliation) of the original scale and those of the adapted scale. Ostroff (1993) cited multicollinearity (and therefore item/subscale redundancy) as an issue within her study. The adapted scale actually evidenced more discriminative validity than did the original Ostroff (1993) scale with respect to the dimensions of the Affective facet. While the intercorrelations between the Warmth/Affiliation and Cooperation/Openness subscales of both the Ostroff (1993) and the ATCS were high (suggesting that these two dimensions are perhaps redundant and measuring the same constructs), the intercorrelation between the Participation and Warmth/Affiliation subscales of the ATCS were moderate (while the intercorrelation between these two subscales was high in the Ostroff [1993] study). This appears to indicate that these two subscales of the ATCS evidence higher levels of discriminant validity with respect to each other than in the original instrument. However, due to the high intercorrelation between Participation and Cooperation/Openness in the ATCS, it might be advisable to produce a revised version of the ATCS in which all three subscales are collapsed into one measure assessing general affective training climate.

Although the present study and the Ostroff (1993) study examined organizational climate as a predictor of differing outcomes, it is noteworthy that the predictive power of

various dimensions of affective training climate of doctoral counseling and clinical psychology programs accounted for a large proportion of explained variance in student psychotherapist positive and negative affect (17.2% and 13.1%, respectively). Although less substantial, the Cooperation/Openness dimension of affective training climate accounted for a significant amount of the variance in student psychotherapist Overall Career Development (3.4%), Currently Experienced Growth (5.5%) and Currently Experienced Depletion (6.3%). In comparison, Ostroff (1993) reported that organizational climates combined (all facets included— affective, cognitive, and instrumental) accounted for 9% of the variance in the outcomes examined in her study, employee job satisfaction and job attitude. More specifically, Ostroff (1993) reported that affective training climate accounted for a significant proportion of the variance in employee job satisfaction. That is, Participation accounted for 11% of the variance in employee job satisfaction, Cooperation/Openness accounted for 13%, and Warmth/Affiliation accounted for 14%. Ostroff (1993) also specifically highlighted the predictive power of affective climate in terms of job satisfaction, commitment, adjustment, turnover intention, and absenteeism (based on evaluation of the beta weights). While it is difficult to compare the predictive power of the original Ostroff (1993) instrument to the ATCS due to the differing outcome variables of each study, it appears that the two scales are comparable in terms of their capability to predict the levels of their respective outcome variables.

*Outliers and Data Transformation.* The question of when and if it is appropriate to remove outliers from data analyses permeates the methodological and statistical

literature of the social sciences. The presence of outliers (particularly those that fall beyond  $\pm 3$  standard deviations from the mean) can significantly skew the distribution of a sample and, therefore, result in a violation of the assumption of normality on which some statistical analyses are predicated. However, many researchers argue that the violation of the assumption of normality alone might not be cause for transforming a dataset. That is, violations of the assumptions of linearity and homogeneity of variance in addition to normality would be of much more concern (Cramer, 1994; as cited in Innes, n.d.). Furthermore, the transformation of a dataset (in an effort to correct for a violation of the assumption of normality) often makes the interpretation of statistical analyses much more difficult (Innes, n.d.).

Therefore, the principal researcher of the present study decided against transformation of the dataset and the removal of outliers to correct for minor violations of the assumption of normality (normality was violated for two of the five regression analyses). Examination of the demographic characteristics associated with the outliers appeared to indicate that non-Caucasian and/or male student psychotherapists constituted a substantial proportion of the outlier pool. It might be of particular interest, therefore, to explore the extent to and mechanisms by which cultural, gender, and diversity characteristics are related to perceptions of the affective training climate of doctoral counseling and clinical psychology training programs.

*Response bias.* It is also possible that, due to the use of self-report measures, participants responded in a manner they thought to be socially desirable. For example, perhaps study participants had a vested interest in portraying their affective states, levels

of professional development, and doctoral training programs to be more positive or more negative than they actually are. Similarly, it is important to consider whether discrepancies exist between certain qualities and/or characteristics of the responding participants versus those that did not respond. It is possible, for example, that student psychotherapists who experience frequent negative affect and feel that they are less professionally developed may have been less likely to participate for a variety of reasons (e.g., lower levels of motivation; feelings of shame or embarrassment). Conversely, perhaps disgruntled student psychotherapists are more apt to volunteer so that they can express their dissatisfaction.

Also, it is possible that the affective state of participants at the time of testing might have influenced their reported levels of affect and professional development, as well as their perceptions of the affective training climate of their training programs. For example, perhaps there was some sort of tendency for student psychotherapists to volunteer for participation right after a good or bad experience that would bias the outcome. It is highly possible that these feelings could color the way in which a participant responded to survey questions about his/her affect and professional development. Also, future research might investigate the extent to which various temporal instructions of the PANAS (i.e., how often participants experience various emotions—generally vs. daily vs. during the past week, etc.) influence the relationship of affective training climate to student psychotherapist affect and professional development.

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APPENDIX A

*Affective Training Climate Scale*

(Adapted from Ostroff, 1993)

**AFFECTIVE TRAINING CLIMATE SCALE**  
**(Adapted from Ostroff, 1993)**

**Instructions:** Please read each of the following statements and consider the extent to which you agree or disagree with each as it relates to your **training program** (by “training program” we ask that you include any faculty members and students within your department that have in your opinion impacted your graduate training). Please use the following scale to rate your responses:

- 0 = Strongly disagree
- 1 = Disagree
- 2 = Undecided
- 3 = Agree
- 4 = Strongly agree

**Participation**

- 1a. The principal or administrator has established procedures that involve faculty and staff members in decision-making processes.
- 1b. The training director has established procedures that involve students in decision-making processes.
  
- 2a. Teachers and students help decide what happens in this school.
- 2b. Students help decide what happens in this training program.
  
- 3a. Teachers frequently participate in decisions on the adoption of new policies.
- 3b. Students frequently participate in decisions on the adoption of new policies.
  
- 4a. Teachers frequently participate in the decisions on the adoption of new programs.
- 4b. Delete this item
  
- 5a. Teachers frequently participate in the decision to hire new staff.
- 5b. Students frequently participate in the decision to hire new faculty.
  
- 6a. Teachers frequently participate in decisions on the promotion of any of the professional staff.
- 6b. Delete this item.

- 7a. Communication is mostly one way – from the top down. (R)
- 7b. Communication is mostly one way – from the top down.

**Cooperation/Openness**

- 1a. Teachers provide and utilize the assistance of other teachers regarding instructional matters.
- 1b. Students provide and utilize the assistance of other students regarding academic matters.
  
- 2a. Teachers give and seek the advice of other teachers regarding instructional matters and student problems.
- 2b. Students give and seek the advice of other students regarding academic matters and client problems.
  
- 3a. Teachers are willing to help students.
- 3b. Faculty are willing to help students.
  
- 4a. Teachers are patient when a student has trouble learning.
- 4b. Faculty are patient when a student has trouble learning.
  
- 5a. The administrators in this school listen to student ideas.
- 5b. The training director in this program listens to student ideas.
  
- 6a. The administrators in this school talk often with teachers and parents.
- 6b. The training director in this program talks often with students and their supervisors.
  
- 7. The training director in this program communicates adequately with site supervisors.  
(Item to be added that was not in the original scale)
  
- 8a. The administrators in this school are willing to hear student complaints and opinions.
- 8b. The training director of this program is willing to hear student complaints and opinions.
  
- 9a. We take time to hear what people feel is needed before introducing change.
- 9b. Faculty take time to hear what students feel is needed before introducing change.
  
- 10a. Teachers or counselors help students with personal problems.
- 10b. Faculty help students with personal problems when appropriate.
  
- 11a. Students in this school can get help and advice from teachers or counselors.
- 11b. Students in this program can get help and advice from faculty.
  
- 12a. The people in our group share ideas with each other.
- 12b. The people in our training program share ideas with each other.

- 13a. We are open to the suggestions of those we serve.
- 13b. Faculty are open to student suggestions.
  
- 14a. We seek the reaction of those we serve to a proposed new program.
- 14b. Faculty seek the reaction of students to a proposed new policy.
  
- 15a. We have power struggles that hinder our work.
- 15b. Students and faculty have power struggles that hinder their work.
  
- 16a. We have conflicts over work values that hinder our work.
- 16b. Students have conflicts that hinder their work.
  
- 17a. Teachers jointly plan instructional activities and lessons.
- 17b. Students work together on academic matters (e.g., share class notes, study in groups, etc.).
  
- 18a. Teachers depend on other faculty for help in instructing all students successfully.
- 18b. Faculty depend on other faculty for help in instructing all students successfully.

### **Warmth and Affiliation**

- 1a. There is a lot of warmth in the relationships between administration and teachers/staff in this school.
- 1b. There is a lot of warmth in the relationships between faculty and students in this training program.
  
- 2a. Teachers in this school like their students.
- 2b. Faculty in this training program like their students.
  
- 3a. Teachers help students to be friendly and kind to each other.
- 3b. Faculty help students to be friendly and kind to each other.
  
- 4a. Teachers understand and meet the needs of each student.
- 4b. Faculty understand and meet the needs of each student.
  
- 5a. If one student makes fun of someone, other students do not join in.
- 5b. If one student makes fun of someone, other students do not join in.
  
- 6a. Students care about each other.
- 6b. Students care about each other.
  
- 7a. Students respect each other.
- 7b. Students respect each other.

- 8a. Students want to be friends with one another.
- 8b. Students want to be friends with one another.
  
- 9a. Students have a sense of belonging in this school.
- 9b. Students have a sense of belonging in this training program.
  
- 10a. Considerable tension exists between our administrators and our faculty. (R)
- 10b. Considerable tension exists between our faculty and our students. (R)
  
- 11a. There is a sense of “family” among teachers in this school.
- 11b. There is a sense of “family” among students in this training program.

**Adapted from “The effects of climate and personal influences on individual behavior and attitudes in organizations” by C. Ostroff, 1993, *Organizational Behavior and Human Decision Processes*, 56, 56-90. Adapted with permission.**

## APPENDIX B

### *The Positive and Negative Affect Schedule (PANAS)*

(Watson, Clark, & Tellegen, 1988)

## The PANAS

This scale consists of number of words that describe different feelings and emotions.

Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you generally feel this way; that is, how you feel on average. Use the following scale to record your answers.

1 = very slightly or not at all

2 = a little

3 = moderately

4 = quite a bit

5 = extremely

_____ interested	_____ irritable
_____ distressed	_____ alert
_____ excited	_____ ashamed
_____ upset	_____ inspired
_____ strong	_____ nervous
_____ guilty	_____ determined
_____ scared	_____ attentive
_____ hostile	_____ jittery
_____ enthusiastic	_____ active
_____ proud	_____ afraid

**From “Development and validation of brief measures of positive and negative affect: The PANAS scales,” by D. Watson, L. A. Clark, and A. Tellegen, 1988, *Journal of Personality and Social Psychology*, 54, 1063-1070. Copyright 1988 by the American Psychological Association. Reproduced with permission.**

APPENDIX C

*Psychotherapists' Professional Development Scales*

(Orlinsky & Ronnestad, 2005)

## PSYCHOTHERAPISTS' PROFESSIONAL DEVELOPMENT SCALES

Identification Code: \_\_\_\_\_ Date: \_\_\_\_\_

1. How long is it since you first began to practice psychotherapy?  
[Count practice during and after training but exclude periods when you did not practice.]  
\_\_\_\_\_ years \_\_\_\_\_ months

Since you began working as a therapist... [0 = Not at all... 5 = Very much]

2. How much have you changed overall as a therapist?
3. How much do you regard this overall change as progress or improvement?
4. How much have you succeeded in overcoming past limitations as a therapist?
5. How much have you realized your full potential as a therapist?

Overall, at the *present* time... [0 = Not at all... 5 = Very much]

6. How much mastery do you have of the techniques and strategies involved in practicing therapy?
7. How well do you understand what happens moment-by-moment during therapy sessions?
8. How well are you able to detect and deal with your patients' emotional reactions to you?
9. How good are you at making constructive use of your personal reactions to patients?
10. How much precision, subtlety and finesse have you attained in your therapeutic work?
11. How capable do you feel to guide the development of other therapists?

In your *recent* psychotherapeutic work, how much... [0 = Not at all... 5 = Very much]

12. Do you feel you are changing as a therapist?
  13. Does this change feel like progress or improvement?
  14. Does this change feel like decline or impairment?
  15. Do you feel you are overcoming past limitations as a therapist?
  16. Do you feel you are becoming more skillful in practicing therapy?
  17. Do you feel you are deepening your understanding of therapy?
  18. Do you feel a growing sense of enthusiasm about doing therapy?
  19. Do you feel you are becoming disillusioned about therapy?
  20. Do you feel you are losing your capacity to respond empathically?
  21. Do you feel your performance is becoming mainly routine?
  22. How important is your further development as a therapist?
-

**From “How psychotherapists develop: A study of therapeutic work and professional growth,” by D. E. Orlinsky and M. H. Ronnestad, 2005. Copyright 2005 by the American Psychological Association. Reproduced with permission.**

**SCORING KEYS:**

**Scoring Key for Overall Career Development (CARDEV: range 0 to 5)**

CARDEV = (Items 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 + 11 / 10)

Coefficient Alpha = .88

**Scoring Key for Currently Experienced Growth (CEGAIN: range 0 to 5)**

CEGAIN = (Items 12 + 13 + 15 + 16 + 17 + 18 / 6)

Coefficient Alpha = .86

**Scoring Key for Currently Experienced Depletion (CELOSS: range 0 to 5)**

CELOSS = (Items 14 + 19 + 20 + 21 / 4)

Coefficient Alpha = .69

**Motivation to Develop = Item 22 (range 0 to 5)**

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APPENDIX D

*Information Sheet*

(for Auburn University Institutional Review Board)

**INFORMATION SHEET**  
**For a Research Study Entitled**  
**The Relationship of Affective Training Climate of Doctoral Counseling and Clinical**  
**Psychology Training Programs to Student Psychotherapist Affect and Professional**  
**Development**

You are invited to participate in a research study that aims to explore the relationship of affective training climate of doctoral counseling and clinical psychology programs to student psychotherapists' overall levels of affect and professional development. Through this research, I hope to enhance understanding of the ways in which doctoral counseling and clinical psychology training programs might be better able to enhance the affective and professional development experiences of their students through an evaluation of their own affective climates. This study is being conducted by Kacey Wilson, B.S. under the supervision of Randolph Pipes, Ph.D. You were selected as a possible participant because you are a member of an APA-accredited counseling or clinical psychology doctoral program, have completed at least one academic year of doctoral training within your program, and have completed at least one semester of conducting therapy with clients as a part of your program requirements (i.e., beginning practicum, advanced practicum, or predoctoral internship).

If you decide to participate, you will click on the link at the bottom of this page to enter the survey. Here, you will be asked to complete the instruments and the demographics sheet. This process should take approximately 10-15 minutes of your time. This is a one-time commitment and you will not be asked for any further information once you have submitted your responses.

Any information obtained in connection with this study will remain anonymous. The survey website does not collect the URL or the email address of participants. You may stop taking the survey at any time, however, once you submit your anonymous information you cannot withdraw your data later since there will be no way to identify individual information.

The anonymous information collected through your participation in this study will be used to complete this dissertation, may be published in a professional journal, and may be presented at professional meetings.

I do not believe that there will be any significant risks or benefits for participating in this study. However, if you should experience any adverse effects in completing the following instruments, please contact your local mental health care provider.

Your decision whether or not to participate will not jeopardize your future relations with Auburn University.

If you have any questions, I will be happy to answer them now or later. I can be reached at the following: Kacey Wilson, Department of Counselor Education, Counseling Psychology, and School Psychology, 2084 Haley Center, Auburn University, Auburn, AL 36849, (334) 844-5160, [wilsok1@auburn.edu](mailto:wilsok1@auburn.edu). My faculty advisor is Dr. Randolph Pipes. He may be reached through the Department of Counselor Education, Counseling Psychology, and School Psychology, 2084 Haley Center, Auburn University, Auburn, AL 36849, (334) 844-5160, [pipesrb@auburn.edu](mailto:pipesrb@auburn.edu).

For more information regarding your rights as a research participant you may contact the Auburn University Office of Human Subjects Research or the Institutional Review Board by phone (334)-844-5966 or e-mail at [hsubjec@auburn.edu](mailto:hsubjec@auburn.edu) or [IRBChair@auburn.edu](mailto:IRBChair@auburn.edu) .

HAVING READ THE INFORMATION PROVIDED, YOU MUST DECIDE WHETHER TO PARTICIPATE IN THIS RESEARCH PROJECT. IF YOU DECIDE TO PARTICIPATE, THE DATA YOU PROVIDE WILL SERVE AS YOUR AGREEMENT TO DO SO.

CLICK HERE TO ENTER THE SURVEY: [link]

APPENDIX E

*Permission from Authors to Adapt and/or Use Scales*

Kacey Wilson - Re: permission to use the Psychotherapists' Professional Development Scales for my dissertation

Page 1

**From:** David Orlinsky <d-orklinsky@uchicago.edu>

**To:** "Kacey Wilson" <wilsok1@auburn.edu>

**Date:** 6/6/2006 7:13 PM

**Subject:** Re: permission to use the Psychotherapists' Professional Development Scales for my dissertation

Dear Kacey Wilson,

If you just want to use the Psychotherapists' Professional Development Scales, then you are welcome to do so as long as you cite the source, which is--Orlinsky, D. E., & Rønnestad, M. H. (2005). *How Psychotherapists Develop: A Study of Therapeutic Work and Professional Development*. Washington, DC: American Psychological Association.

Just be careful in scoring the scales because there is a minor (and easily detectable) error in the scoring key for one of them given in the first printing of the book (which you likely have).

If you don't find it I will let you know what it is but am about to leave on a trip and don't have time to do so now. I should be back after June 27th so please write me again in about 3 weeks.

Best,  
David Orlinsky

Kacey Wilson - Re: permission to adapt items from your Teacher Climate Items by Dimension Scale for my dissertation

Page 1

**From:** "Cheri Ostroff" <costroff@psyc.umd.edu>

**To:** "Kacey Wilson" <wilsok1@auburn.edu>

**Date:** 6/6/2006 5:02 PM

**Subject:** Re: permission to adapt items from your Teacher Climate Items by Dimension Scale for my dissertation

Hi Kacey

No problem at all. The only thing I would ask is that you simply state that some (or all, if that's the case) of the items were adapted from Ostroff (1993).

Good luck with your study. It's always heartening to see someone excited about their research.

Cheri

>>> "Kacey Wilson" <wilsok1@auburn.edu> 06/06/06 3:48 PM >>>

Hello again, Dr. Ostroff! I hope this finds you doing well and enjoying the beginning of the summer! My dissertation adviser and I are very excited about the potential that your climate assessment instrument could have for doctoral psychology training programs! We would love the opportunity to adapt items from your "Teacher Climate Items by Dimension" scale to create an instrument that could be used to assess climate using your taxonomy by graduate psychology training programs. I'm writing to ask if you would grant us permission to do so and, if so, if there are any conditions or procedures that you would like for us to follow or use.

I truly appreciate all of your research and help, Dr. Ostroff!

Thanks so much!

Kacey

Kacey Wilson - Re: PANAS Permission

Page 1

**From:** "Dr. David Watson" <david-watson@uiowa.edu>

**To:** "Kacey Wilson" <wilsok1@auburn.edu>

**CC:** <la-clark@uiowa.edu>, <kthomas@apa.org>

**Date:** 10/9/2007 1:29 PM

**Subject:** Re: PANAS Permission

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Good luck with your dissertation.

Sincerely,

David Watson

APPENDIX F

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- Appendix, page 1070, from Development and validation of brief measures of positive and negative affect: The PANAS scales. Watson, David; Clark, Lee A.; Tellegen, Auke. Journal of Personality and Social Psychology. 1988 Jun Vol 54(6) 1063-1070

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## APPENDIX G

### *Assumptions of Multiple Regression Analysis*

## ASSUMPTIONS OF MULTIPLE REGRESSION ANALYSIS

### *Assumptions of multiple regression analysis*

According to Shannon and Davenport (2000), the following assumptions are critical when using multiple regression analysis: independence of the predictor variables; linearity; normality; and homogeneity of variance. Ensuring that these assumptions are met is important in terms of supporting the veracity of the predictions made among variables. If one or more of these assumptions is not met, then the results of the multiple regression analysis should be interpreted with caution. The remaining paragraphs of this section will review the nature of each of the assumptions of multiple regression analysis and provide an explanation as to how researchers can determine if the four assumptions have been met within the context of their studies.

### *The assumption of the independence of predictor variables*

The problem of multicollinearity occurs in multiple regression analysis when the independent (i.e., predictor) variables are highly correlated with one another. This issue can result in underestimation of the significance of the relationship between the independent and dependent variables (Huck, 2000). That is, the presence of multicollinearity within a multiple regression analysis may lead to the assumption that the independent variables are less significantly related (or not related at all) to the dependent variable than, in reality, they are (Huck, 2000).

There are a number of measures that can be undertaken to examine the extent to which multicollinearity is present within a multiple regression analysis, if it is at all. The independence of the predictor variables can be examined by analyzing the correlation matrix for correlations among the independent variables. Most optimally, there would be no correlation between any of the independent variables, which would indicate that the extent to which each is contributing to the prediction of the dependent variable is accurate and recognized (Shannon & Davenport, 2000). The higher the correlation between the independent variables, the more likely it is that an underestimation of the predictive power of each on the dependent variable is occurring (Shannon & Davenport, 2000). Additionally, one can examine the tolerance values provided in the multiple regression output which will assist in the determination of the amount of overlap among the independent variables. If a great deal of overlap is present among predictors, tolerance values will be lower. Conversely, higher tolerance values indicate the presence of little overlap, indicating that a more sufficient amount of variance for that predictor to contribute to the dependent variable (Shannon & Davenport, 2000). Finally, one can examine the variance inflation factor (VIF) to determine the extent to which the presence of overlap between predictor variables is influencing the variability of the regression coefficients (Shannon & Davenport, 2000). An inverse relationship exists between the tolerance value and VIF, such that a lower tolerance value (i.e., evidence that a larger amount of overlap is present between predictors) will result in a higher VIF. The higher the VIF, the more likely it is that regression coefficient variability has been inflated

(indicating the presence of more heterogeneity of variability within the sample—that is, that participant scores are dissimilar) (Huck, 2000; Shannon & Davenport, 2000).

A primary assumption of multiple regression analysis is that the relationship that exists between the independent and dependent variables is linear. This means that the data points fall along the path of a straight line within a scatterplot depicting the relationship between independent and dependent variables (Huck, 2000). The assumption of linearity can be checked by analyzing a scatterplot of the relationships between the independent and dependent variables. If the relationship between the predictor and outcome variables is linear, there will be no evidence of curvilinearity within the scatterplot (Shannon & Davenport, 2000). The presence of curvilinearity might result in an undervaluation of the strength of the relationship between the independent and dependent variables (Huck, 2000).

#### *The assumption of normality in multiple regression analysis*

The assumption of normality refers to the presence of a normal distribution of the values of the dependent variable within a population (Huck, 2000). If this assumption is significantly violated, the probability of making a Type I or Type II error increases (Osborne, 2002). In order to check the assumption of normality, it is necessary to determine the extent to which the regression standardized residuals of the multiple regression analysis conform to a normal distribution (Shannon & Davenport, 2000). This can be achieved by constructing a histogram and normal probability plot of the regression standardized residuals. If the assumption of normality is met, the data will conform to a

normal population curve within the histogram and the residuals will evidence linearity within the normal probability plot (Shannon & Davenport, 2000).

*The assumption of homogeneity of variance in multiple regression analysis*

Homogeneity of variance refers to the assumption that the same degree of variability with respect to the dependent variable is present within a sample (Huck, 2000). If this assumption is not met, the chances of committing a Type I or Type II error are increased (Shannon & Davenport, 2000). To determine whether the assumption of homogeneity of variances is met, a scatterplot can be created in which the regression studentized residuals are plotted against the regression standardized predicted values. If the variance among the residuals is equal, the data points will be randomly scattered throughout the scatterplot (Shannon & Davenport, 2000).

APPENDIX H

*Preliminary Data Analyses*

## PRELIMINARY DATA ANALYSES

The purpose of this section is to provide a description of the preliminary data analyses undertaken to determine the extent to which the assumptions of multiple regression analysis were met for each regression analysis. The data analyses will be presented in a sequential manner, with Hypothesis 1a being presented first and Hypothesis 2c last.

*Hypothesis 1a:* The affective training climate (as measured by the Participation, Cooperation/Openness, and Warmth/Affiliation scales of the ATCS) of doctoral clinical and counseling psychology training programs will predict degree of student positive affect (as measured by the Positive Affect subscale of the PANAS). That is, these three predictor variables will account for a significant amount of the variance in student positive affect.

*Assumption of independence.* Analysis of the correlation matrix indicated that the correlations among the three independent variables for this multiple regression model were as follows: a)  $r = .71$  for the “Participation” and “Cooperation” scales; (b)  $r = .54$  for the “Participation” and “Warmth” scales; (c) and  $r = .78$  for the “Cooperation” and “Warmth” scales. These correlations (all of which were significant, with a moderate correlation between Participation and Warmth/Affiliation; a moderate to high correlation between Participation and Cooperation/Openness; and a moderate to high correlation between Cooperation/Openness and Warmth/Affiliation) indicate that multicollinearity

could be a potential problem. These significant moderate to high correlations among the independent variables could result in an underestimation of the predictive power of each on the dependent variable is occurring (Shannon & Davenport, 2000). Additionally, the Tolerance and VIF values for Warmth/Affiliation, Cooperation/Openness, and Participation were 1.000/1.000, .39/2.58, and .71/1.40 respectively, which further supports the presence of multicollinearity. Based on these statistics, it is likely that the power of the independent variables was underrepresented by the analysis and, therefore, the results should be interpreted with caution.

*Assumption of linearity.* To determine the extent to which the assumption of linearity was met, scatterplots were constructed in which the relationships between the independent and dependent variables were plotted. All scatterplots evidenced linearity, therefore the assumption of linearity was met (see Scatterplots A, B, and C).

*Assumption of normality.* To examine the extent to which the assumption of normality was met, a normal probability plot and histogram of the regression standardized residuals was constructed. Initial examination of the histogram and normal probability plot appeared to evidence normality. The descriptive data evidenced the presence of negative skewness (Skewness =  $-.85$  to  $-.32$ ) and positive kurtosis (Kurtosis =  $-.60$  to  $.98$ ). However, since both the Skewness and Kurtosis values fall within the  $-1.0$  to  $1.0$  range, the data can be considered to be normal. Therefore, the assumption of normality was met (See Histogram 1a and Normal Probability Plot 1a).

*Assumption of homogeneity of variance.* To examine the extent to which the assumption of homogeneity of variance was met, a scatterplot was created in which the

regression studentized residuals were plotted against the regression standardized predicted values. The data points were randomly scattered throughout the scatterplot indicating that the variance among the residuals was equal (Shannon & Davenport, 2000). Therefore, the assumption of homogeneity of variance was met (See Scatterplot D).

*Hypothesis 1b:* The affective training climate (as measured by the Participation, Cooperation/Openness scales of the ATCS) of doctoral counseling and clinical psychology training programs will predict degree of student negative affect (as measured by the Negative Affect subscale of the PANAS). That is, these three predictor variables will account for a significant amount of the variance in student psychotherapist Negative Affect.

*Assumption of independence.* Analysis of the correlation matrix indicated that the correlations among the three independent variables for this multiple regression model were as follows: a)  $r = .71$  for the “Participation” and “Cooperation” scales; (b)  $r = .54$  for the “Participation” and “Warmth” scales; (c) and  $r = .78$  for the “Cooperation” and “Warmth” scales. These correlations (all of which were significant, with a moderate correlation between Participation and Warmth/Affiliation; a moderate to high correlation between Participation and Cooperation/Openness; and a moderate to high correlation between Cooperation/Openness and Warmth/Affiliation) indicate the multicollinearity could be a potential problem. These significant moderate to high correlations among the independent variables could result in an underestimation of the predictive power of each on the dependent variable is occurring (Shannon & Davenport, 2000). Based on these

statistics, it is likely that the power of the independent variables was underrepresented by the analysis and, therefore, the results should be interpreted with caution.

*Assumption of linearity.* To determine the extent to which the assumption of linearity was met, scatterplots were constructed in which the relationships between the independent and dependent variables were plotted. The scatterplots evidenced linearity, therefore the assumption of linearity was met for these two relationships (see Scatterplots E, F, and G).

*Assumption of normality.* To examine the extent to which the assumption of normality was met, a normal probability plot and histogram of the regression standardized residuals was constructed (See Histogram 1b and Normal Probability Plot 1b). Initial examination of the histogram and normal probability plot appeared to evidence normality. However, the descriptive data evidenced the presence of skewness (Skewness =  $-0.52$  to  $1.30$ ) and kurtosis (Kurtosis =  $-0.60$  to  $2.75$ ). Although it appeared that both the histograms and normal probability plots evidenced acceptable normality, the Skewness and Kurtosis statistics indicated the presence of extreme outliers outside of  $\pm 2$  standard deviations from the mean as well as a distribution that was slightly taller than a normal distribution curve. Therefore, the results of this analysis should be interpreted with caution (Shannon & Davenport, 2000)

*Assumption of homogeneity of variance.* To examine the extent to which the assumption of homogeneity of variance was met, a scatterplot was created in which the regression studentized residuals were plotted against the regression standardized predicted values. The data points were randomly scattered throughout the scatterplot

indicating that the variance among the residuals was equal (Shannon & Davenport, 2000). Therefore, the assumption of homogeneity of variance was met (See Scatterplot H).

*Hypothesis 2a:* The affective training climate (as measured by the Participation, Cooperation/Openness, and Warmth/Affiliation scales of the ATCS) of counseling and clinical psychology training programs will predict degree of student psychotherapist Overall Career Development (as measured by the Overall Career Development scale of the PPDS). That is, these three predictor variables will account for a significant amount of the variance in Overall Career Development.

*Assumption of independence.* Analysis of the correlation matrix indicated that the correlations among the three independent variables for this multiple regression model were as follows: a)  $r = .71$  for the “Participation” and “Cooperation” scales; (b)  $r = .53$  for the “Participation” and “Warmth” scales; (c) and  $r = .78$  for the “Cooperation” and “Warmth” scales. These correlations (all of which were significant, with a moderate correlation between Participation and Warmth/Affiliation; a moderate to high correlation between Participation and Cooperation/Openness; and a moderate to high correlation between Cooperation/Openness and Warmth/Affiliation) indicate the multicollinearity could be a potential problem. These significant moderate to high correlations among the independent variables could result in an underestimation of the predictive power of each on the dependent variable is occurring (Shannon & Davenport, 2000). Additionally, the Tolerance/VIF values for Cooperation/Openness, Participation, and Warmth/Affiliation were 1.00/1.00, .50/2.00, and .39/2.58 respectively, which is further evidence of multicollinearity (Shannon & Davenport, 2000). Based on these statistics, it is likely that

the power of the independent variables was underrepresented by the analysis and that the strength of the predictive power of each independent variable is a conservative estimate.

*Assumption of linearity.* To determine the extent to which the assumption of linearity was met, scatterplots were constructed in which the relationships between the independent and dependent variables were plotted. All scatterplots evidenced linearity, therefore the assumption of linearity was met (See Scatterplots I, J, and K).

*Assumption of normality.* To examine the extent to which the assumption of normality was met, a normal probability plot and histogram of the regression standardized residuals was constructed. Initial examination of the histogram and normal probability plot appeared to indicate the presence of normality. The data evidenced the presence of skewness (Skewness =  $-.75$  to  $-.33$ ) and kurtosis (Kurtosis =  $-.60$  to  $.70$ ). Given that the Skewness and Kurtosis statistics fell within the acceptable range ( $-1.0$  to  $1.0$ ), the assumption of normality was met for this analysis (See Histogram 2a and Normal Probability Plot 2a).

*Assumption of homogeneity of variance.* To examine the extent to which the assumption of homogeneity of variance was met for the initial analysis, a scatterplot was created in which the regression studentized residuals were plotted against the regression standardized predicted values. The data points were randomly scattered throughout the scatterplot indicating that the variance among the residuals was equal (Shannon & Davenport, 2000). Therefore, the assumption of homogeneity of variance was satisfied for this analysis (See Scatterplot L).

*Hypothesis 2b:* The affective training climate (as measured by the Participation, Cooperation/Openness, and Warmth/Affiliation scales of the ATCS) of doctoral clinical and counseling psychology training programs will predict degree of student psychotherapist Currently Experienced Growth (as measured by the Currently Experienced Growth scale of the PPDS). That is, these three predictor variables will account for a significant amount of the variance in student psychotherapist Currently Experienced Growth.

*Assumption of independence.* Analysis of the correlation matrix indicated that the correlations among the three independent variables for this multiple regression model were as follows: a)  $r = .71$  for the Participation and Cooperation/Openness scales; (b)  $r = .53$  for the Participation and Warmth/Affiliation scales; (c) and  $r = .78$  for the Cooperation/Openness and Warmth/Affiliation scales. These correlations (all of which were significant, with a moderate correlation between Participation and Warmth/Affiliation; a moderate to high correlation between Participation and Cooperation/Openness; and a moderate to high correlation between Cooperation/Openness and Warmth/Affiliation) indicate the multicollinearity could be a potential problem. These significant moderate to high correlations among the independent variables could result in an underestimation of the predictive power of each on the dependent variable is occurring (Shannon & Davenport, 2000). Additionally, the Tolerance/VIF values for Cooperation/Openness, Participation, and Warmth/Affiliation were 1.00/1.00, .50/2.00, and .39/2.58 respectively, which further supports the presence of multicollinearity. Based on these statistics, it is likely that the power of the

independent variables was underrepresented by the analysis and, therefore, the results should be interpreted with caution as conservative estimates.

*Assumption of linearity.* To determine the extent to which the assumption of linearity was met, scatterplots were constructed in which the relationships between the independent (Participation, Cooperation/Openness, and Warmth/Affiliation) and dependent (Currently Experienced Growth) variables were plotted. All scatterplots evidenced linearity, therefore the assumption of linearity was met for Hypothesis 2b (see Scatterplots M, N, and O).

*Assumption of normality.* To examine the extent to which the assumption of normality was met, a normal probability plot and histogram of the regression standardized residuals was constructed (See Histogram 2b and Normal Probability Plot 2b). Initial examination of the histogram and normal probability plot appeared to indicate the presence of normality. However, the data evidenced the presence of skewness (Skewness = -1.06 to -.32) and kurtosis (Kurtosis = -.60 to 1.62). Although it appeared that both the histograms and normal probability plots evidenced acceptable normality, the Skewness and Kurtosis statistics fell slightly outside of the acceptable range, indicating the presence of extreme outliers outside of +/- 2 standard deviations from the mean as well as distributions that were slightly taller and/or flatter than a normal distribution curve. Therefore, the results of this analysis should be interpreted with caution.

*Assumption of homogeneity of variance.* To examine the extent to which the assumption of homogeneity of variance was met, a scatterplot was created in which the regression studentized residuals were plotted against the regression standardized

predicted values. The data points were randomly scattered throughout the scatterplot indicating that the variance among the residuals was equal (Shannon & Davenport, 2000). Therefore, the assumption of homogeneity of variance was met for Hypothesis 2b (See Scatterplot P).

*Hypothesis 2c:* The affective training climate (as measured by the Participation, Cooperation/Openness scales of the ATCS) of doctoral counseling and clinical psychology training programs will predict degree of student psychotherapist Currently Experienced Depletion (as measured by the Currently Experienced Depletion scale of the PPDS). That is, these three predictor variables will account for a significant amount of the variance in student psychotherapist Currently Experienced Depletion.

*Assumption of independence.* Analysis of the correlation matrix indicated that the correlations among the three independent variables for this multiple regression model were as follows: a)  $r = .71$  for the Participation and Cooperation/Openness scales; (b)  $r = .53$  for the Participation and Warmth/Affiliation scales; (c) and  $r = .78$  for the Cooperation/Openness and Warmth/Affiliation scales. These correlations (all of which were significant, with a moderate correlation between Participation and Warmth/Affiliation; a moderate to high correlation between Participation and Cooperation/Openness; and a moderate to high correlation between Cooperation/Openness and Warmth/Affiliation) indicate the multicollinearity could be a potential problem. These significant moderate to high correlations among the independent variables could result in an underestimation of the predictive power of each on the dependent variable is occurring (Shannon & Davenport, 2000). Additionally, the

Tolerance/VIF values for Cooperation/Openness, Participation, and Warmth/Affiliation were 1.00/1.00, .50/2.00, and .39/2.58 respectively, which further supports the presence of multicollinearity (Shannon & Davenport, 2000). Based on these statistics, it is likely that the power of the independent variables was underrepresented by the analysis and, therefore, the results should be interpreted with caution.

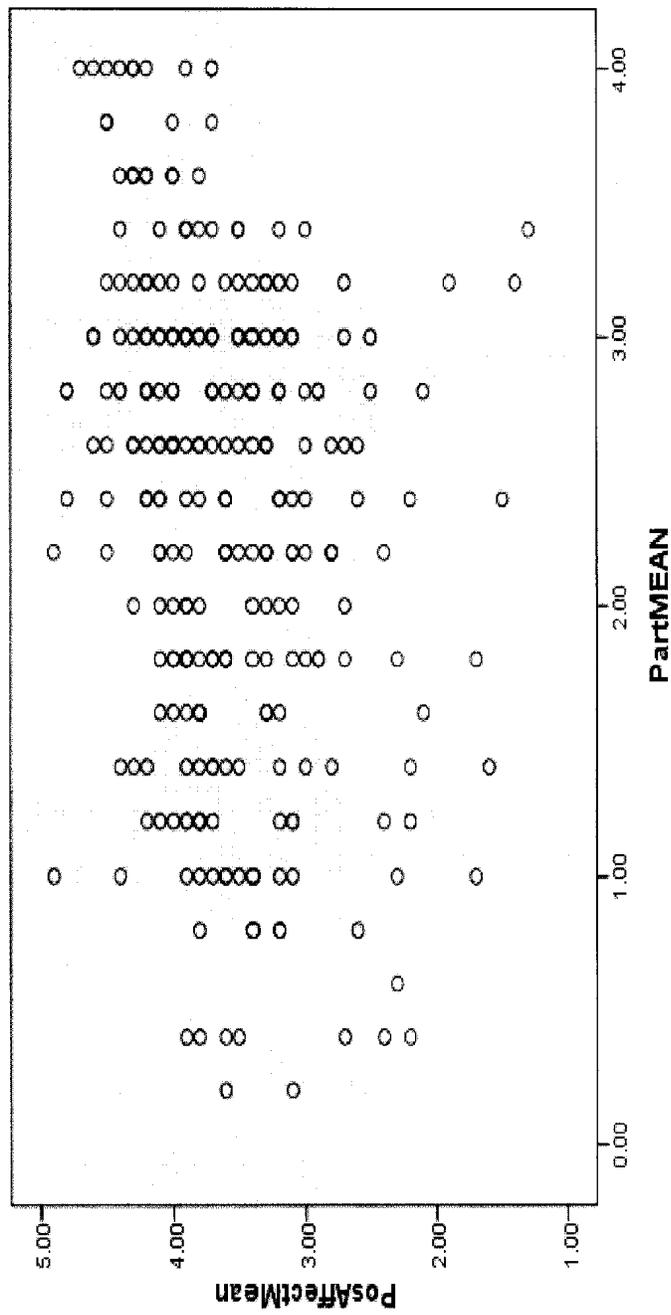
*Assumption of linearity.* To determine the extent to which the assumption of linearity was met, scatterplots were constructed in which the relationships between the independent (Participation, Cooperation/Openness, and Warmth/Affiliation) and dependent (Currently Experienced Depletion) variables were plotted. All scatterplots evidenced linearity, therefore the assumption of linearity was met for Hypothesis 2c (See Scatterplots Q, R, and S).

*Assumption of normality.* To examine the extent to which the assumption of normality was met, a normal probability plot and histogram of the regression standardized residuals was constructed (See Histogram 2c and Normal Probability Plot 2c). Initial examination of the histogram and normal probability plot evidenced questionable normality. The data evidenced the presence of skewness (Skewness = -.52 to 1.26) and kurtosis (Kurtosis = -.60 to 1.30). That is, the Skewness and Kurtosis statistics indicated the presence of extreme outliers outside of +/- 2 standard deviations from the mean as well as distributions that were slightly taller and/or flatter than a normal distribution curve. Therefore, the results of this analysis should be interpreted with caution.

*Assumption of homogeneity of variance.* To examine the extent to which the assumption of homogeneity of variance was met, a scatterplot was created in which the regression studentized residuals were plotted against the regression standardized predicted values for Hypothesis 2c. The data points were randomly scattered throughout the scatterplot indicating that the variance among the residuals was equal (Shannon & Davenport, 2000). Therefore, the assumption of homogeneity of variance was met for Hypothesis 2c (See Scatterplot T).

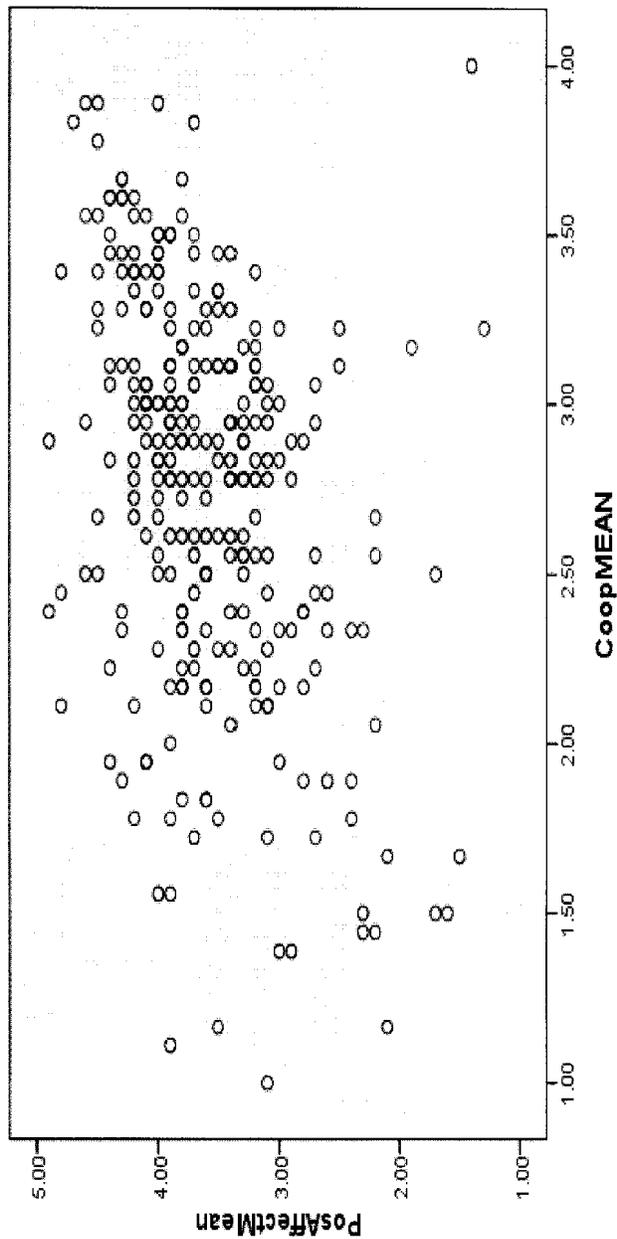
# SCATTERPLOT A

Positive Affect by Participation



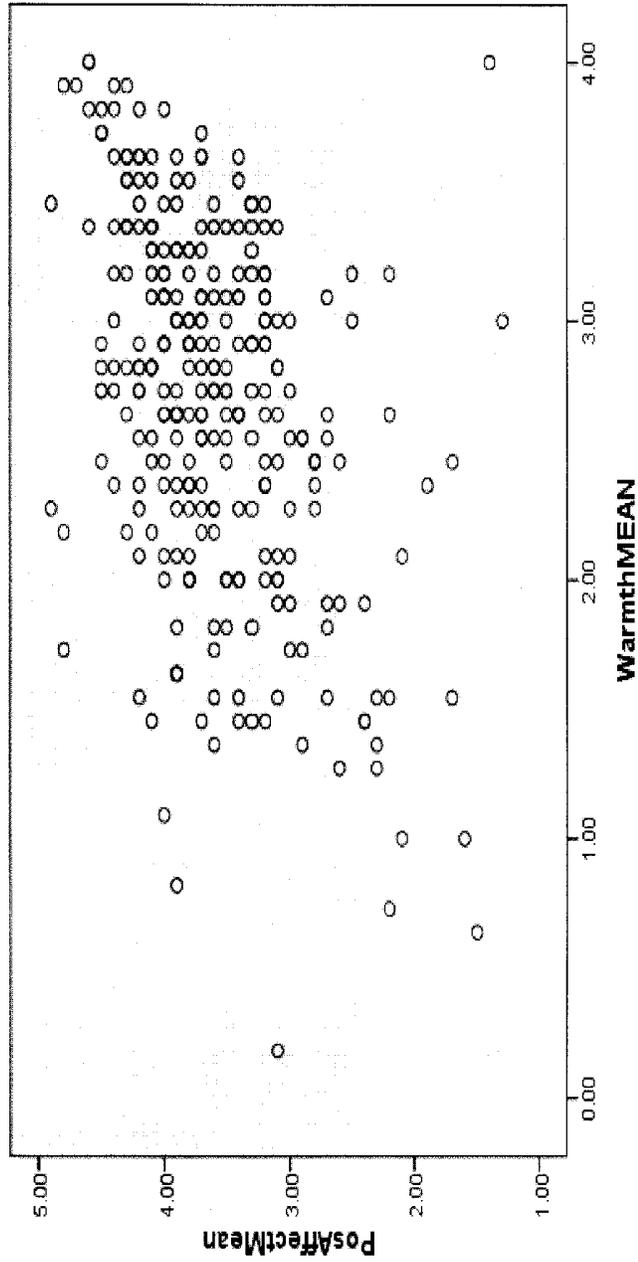
# SCATTERPLOT B

Positive Affect by Cooperation/Openness



# SCATTERPLOT C

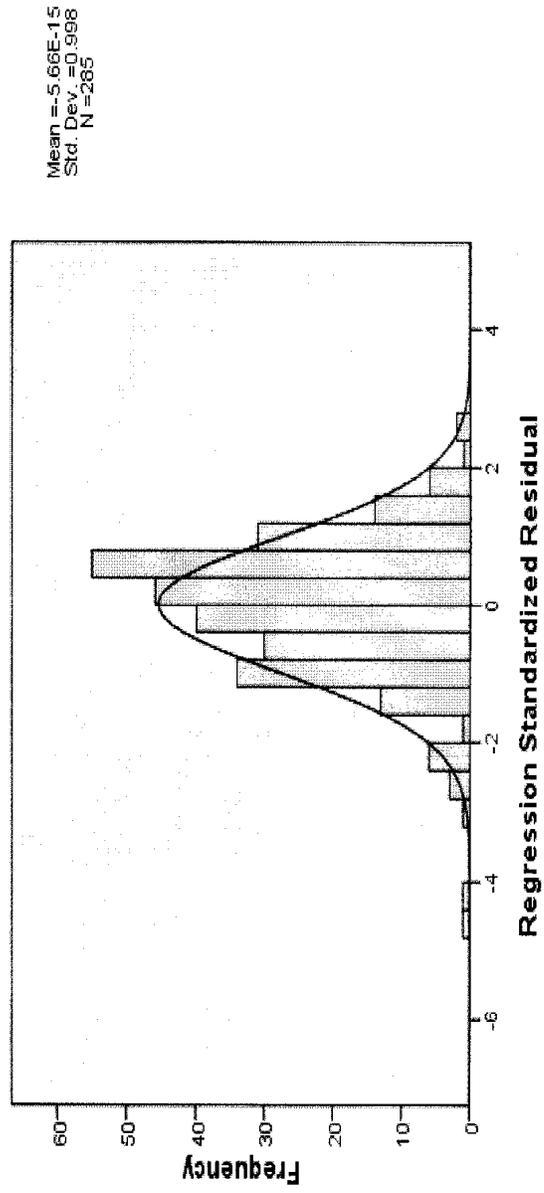
Positive Affect by Warmth/Affiliation



# HISTOGRAM 1a

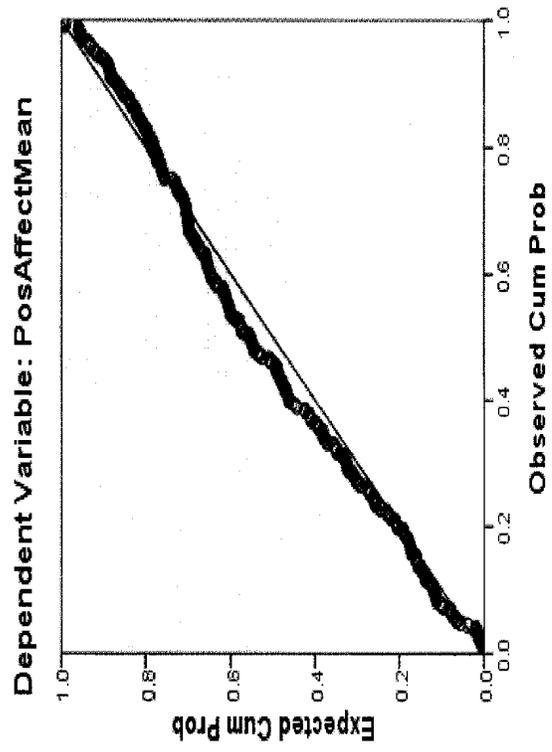
## Histogram

Dependent Variable: PosAffectMean



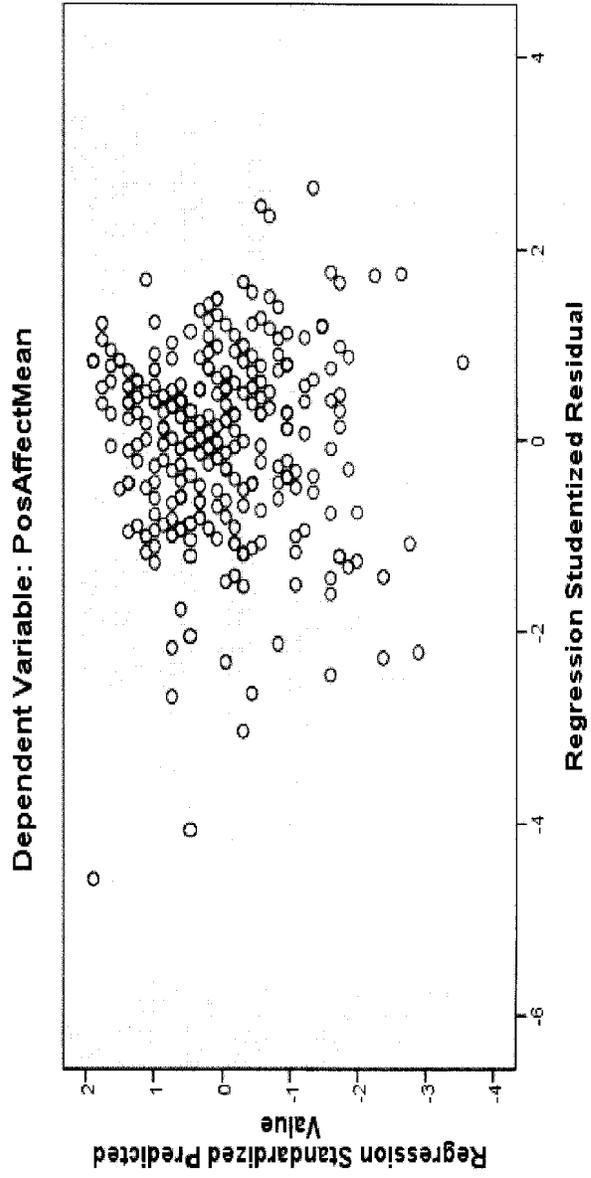
# NORMAL PROBABILITY PLOT 1a

Normal P-P Plot of Regression Standardized Residual



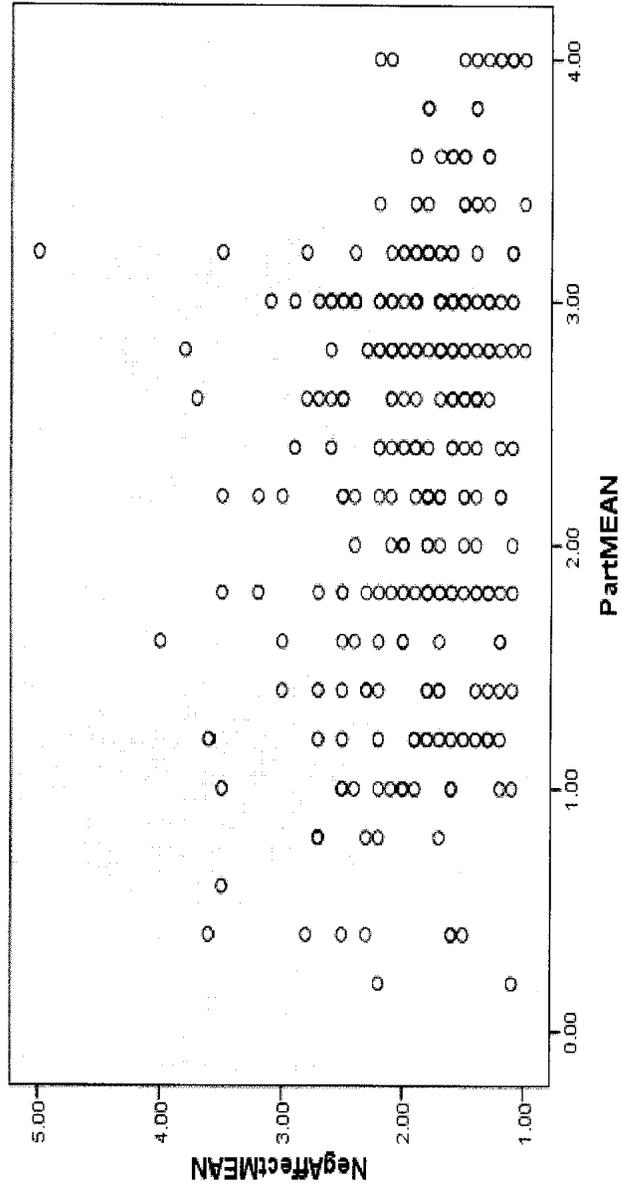
# SCATTERPLOT D

Scatterplot



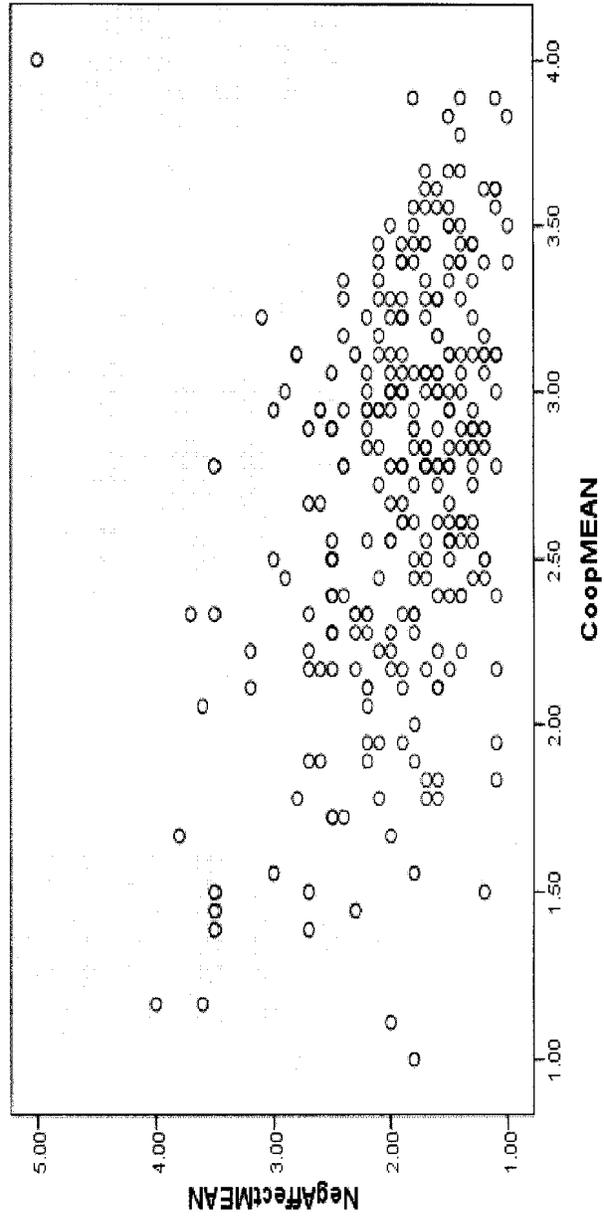
# SCATTERPLOT E

Negative Affect by Participation



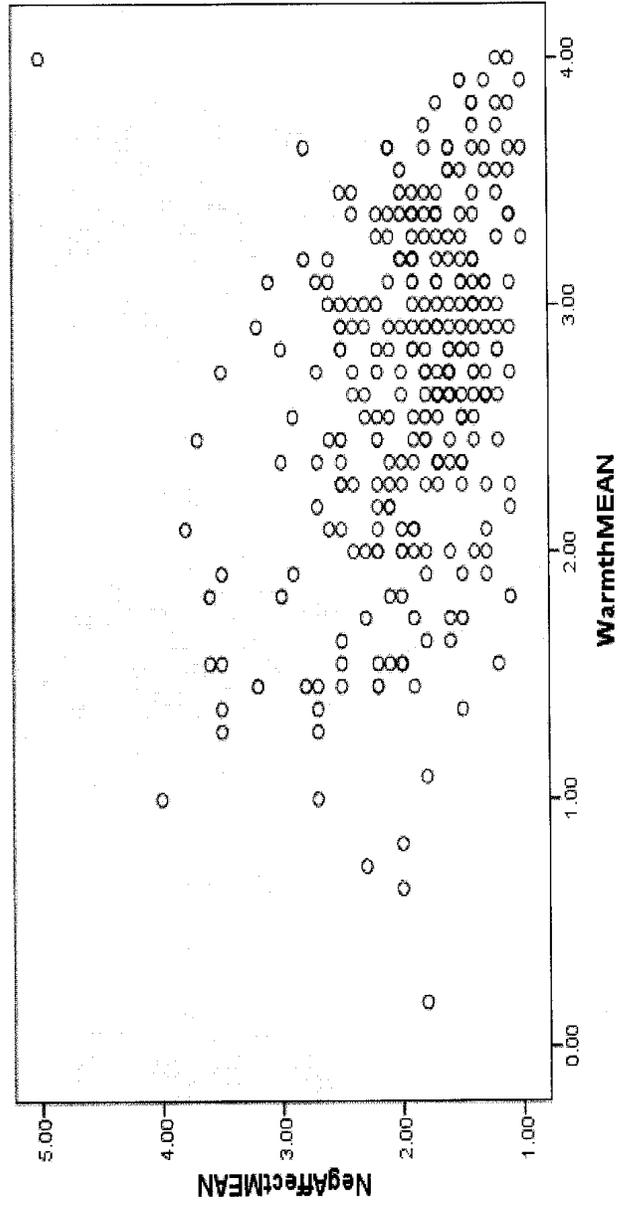
# SCATTERPLOT F

Negative Affect by Cooperation/Openness



# SCATTERPLOT G

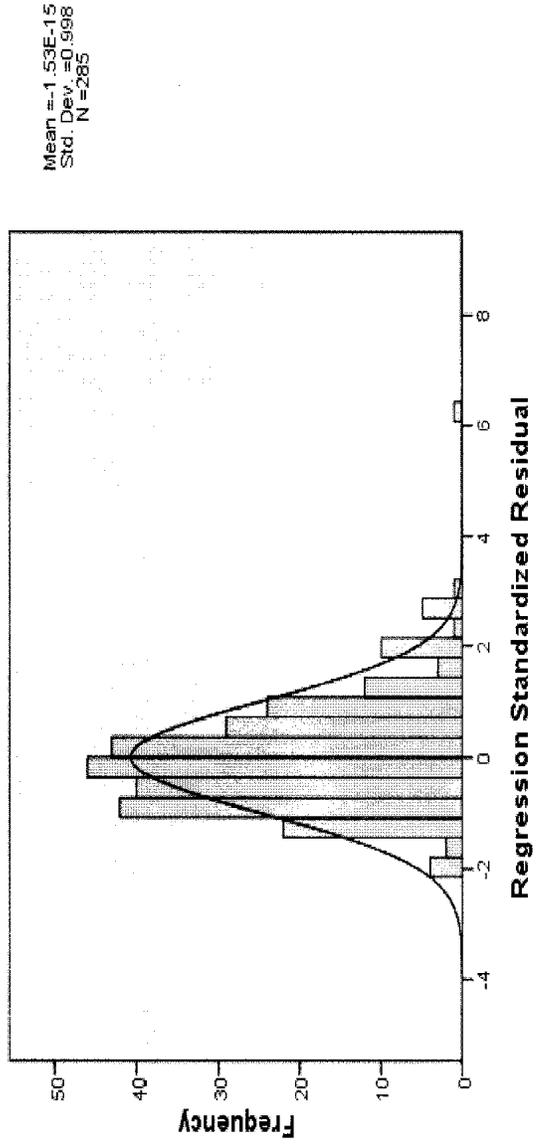
Negative Affect by Warmth/Affiliation



# HISTOGRAM 1b

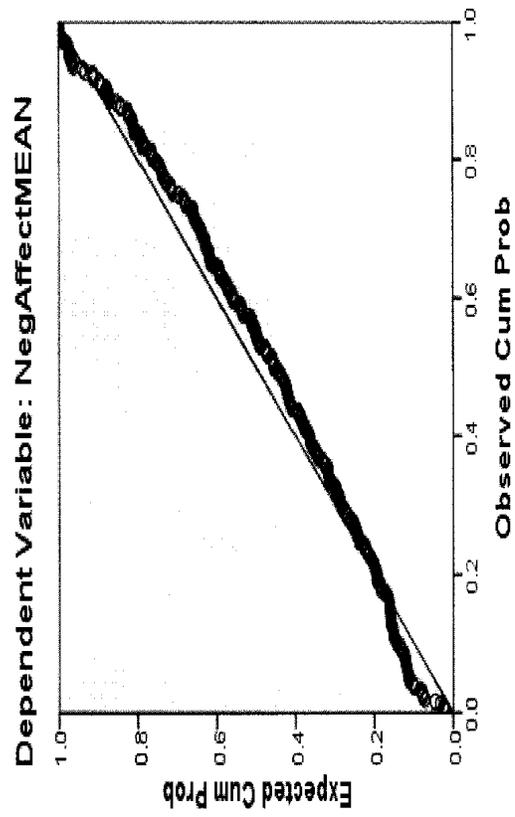
Histogram

Dependent Variable: NegAffectMEAN



# NORMAL PROBABILITY PLOT 1b

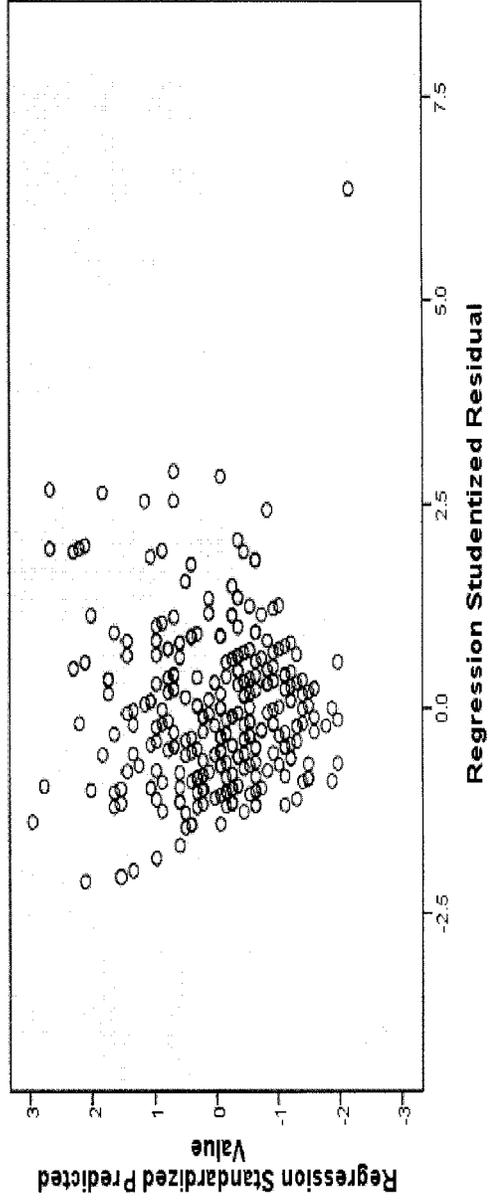
Normal P-P Plot of Regression Standardized Residual



# SCATTERPLOT H

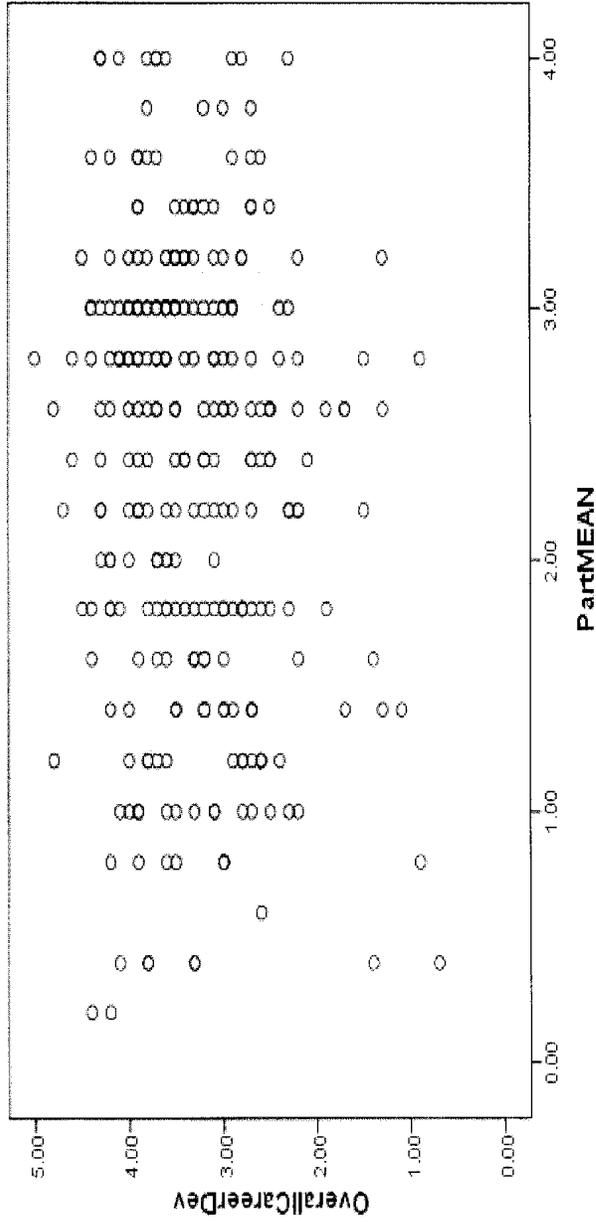
Scatterplot

Dependent Variable: NegAffectMEAN



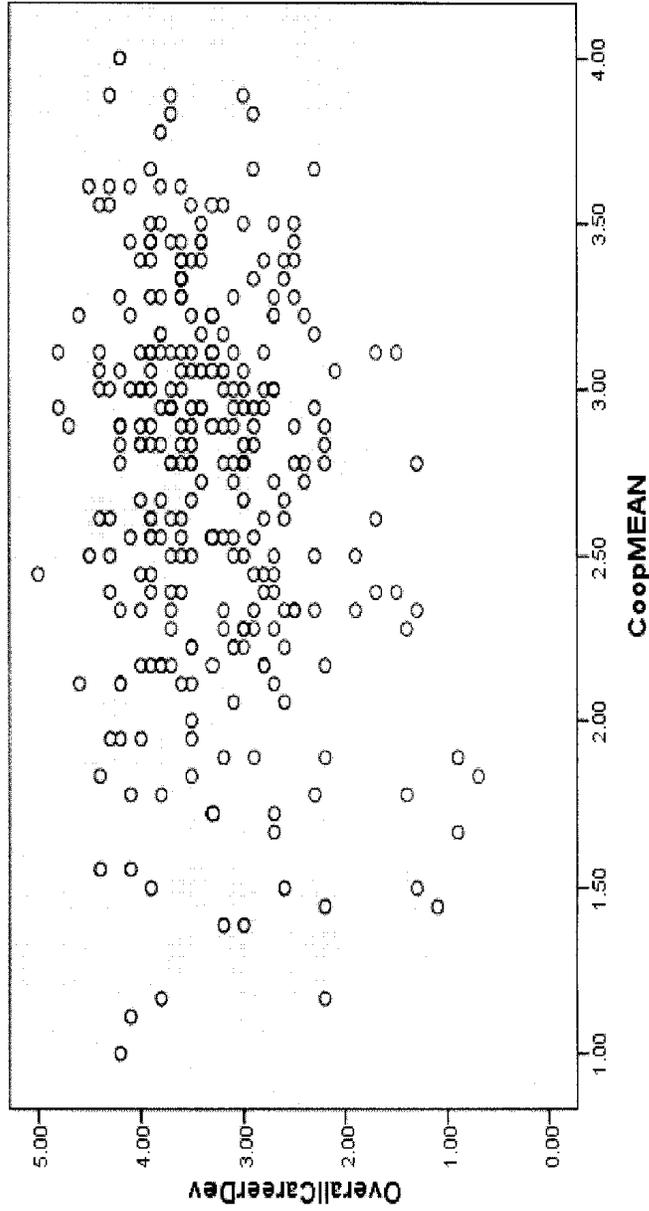
# SCATTERPLOT I

Overall Career Development by Participation



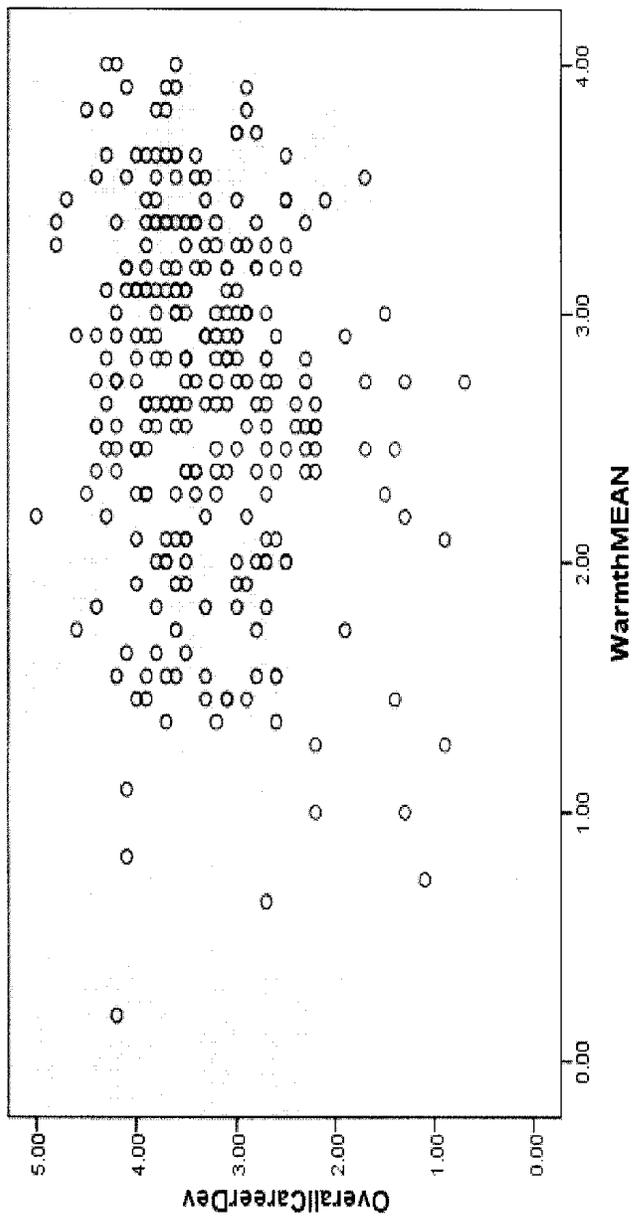
# SCATTERPLOT J

Overall Career Development by Cooperation/Openness



# SCATTERPLOT K

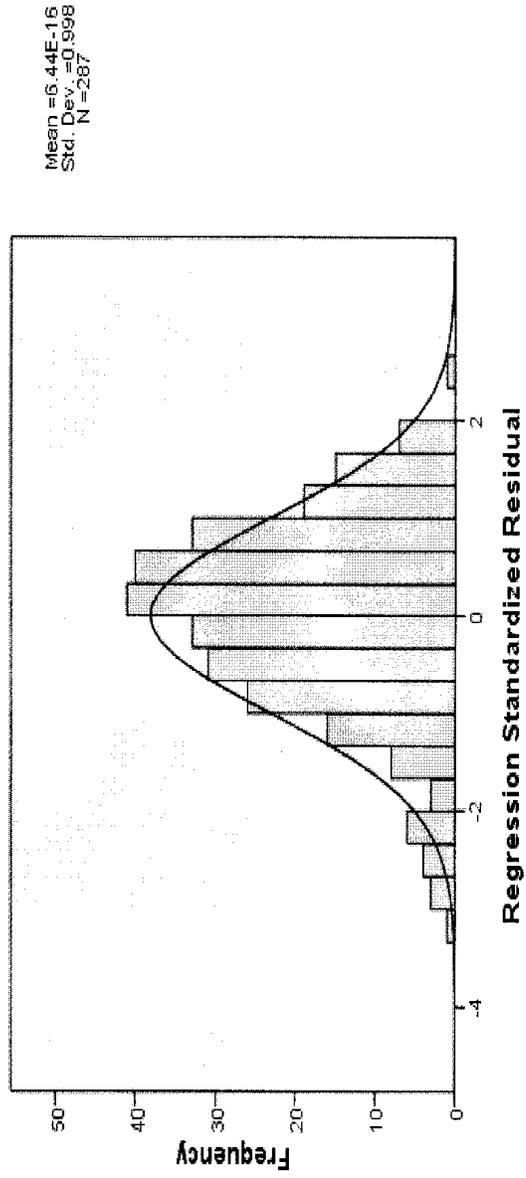
Overall Career Development by Warmth/Affiliation



# HISTOGRAM 2a

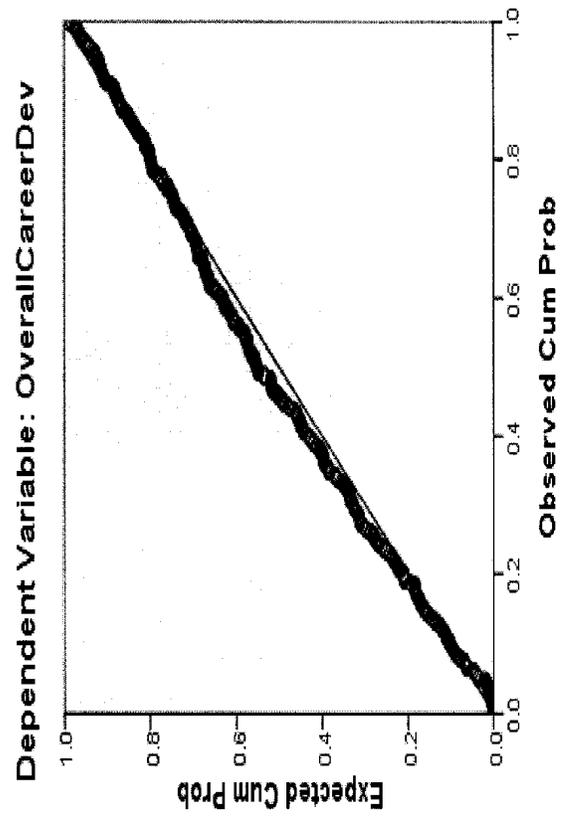
## Histogram

Dependent Variable: OverallCareerDev



## NORMAL PROBABILITY PLOT 2a

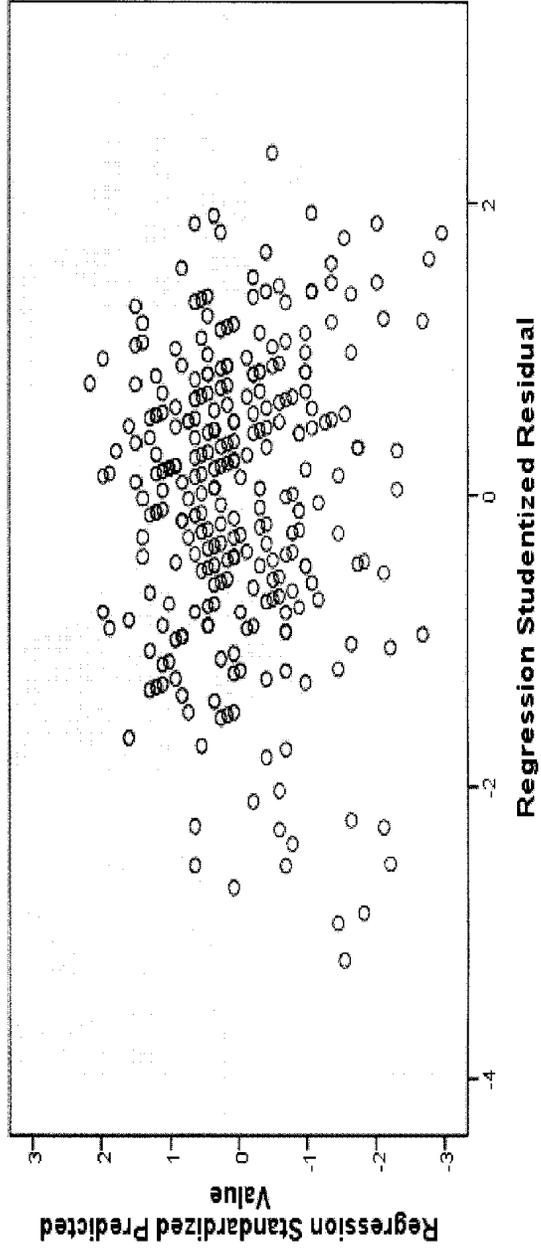
Normal P-P Plot of Regression Standardized Residual



# SCATTERPLOT I

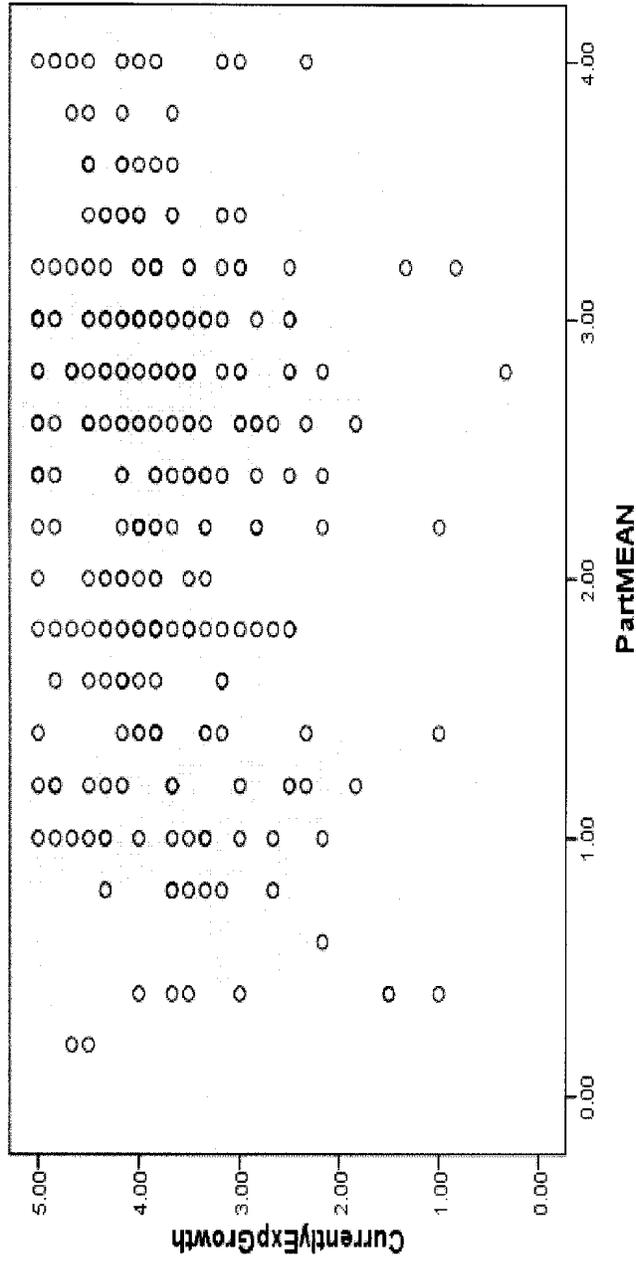
Scatterplot

Dependent Variable: OverallCareerDev



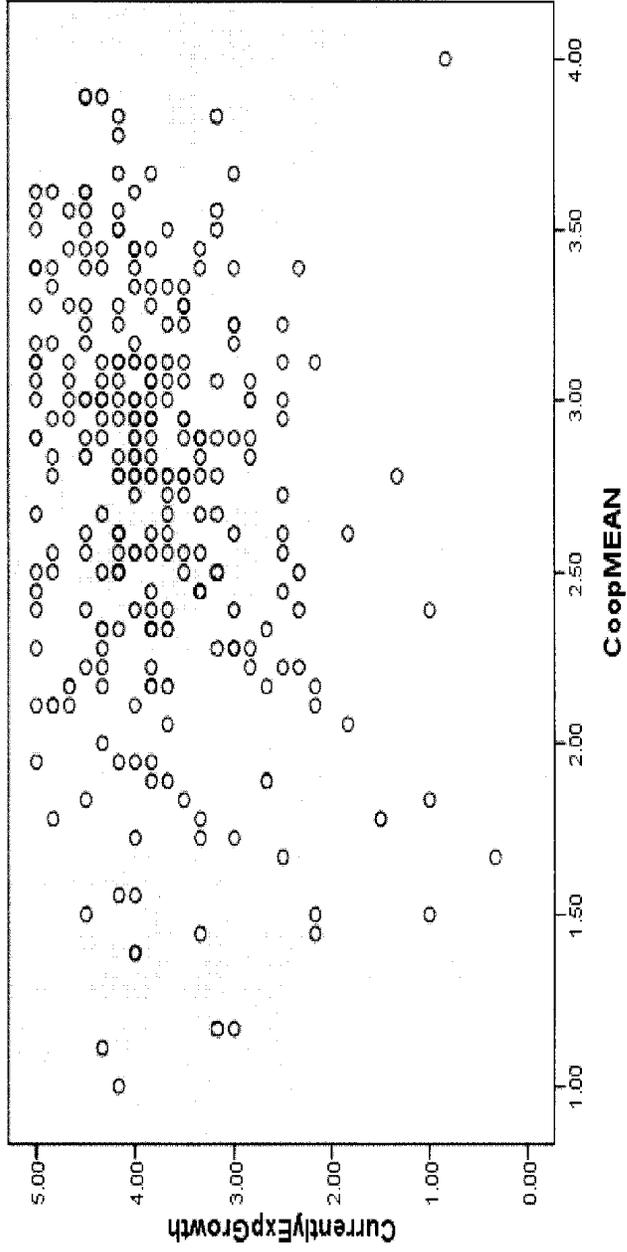
# SCATTERPLOT M

Currently Experienced Growth by Participation



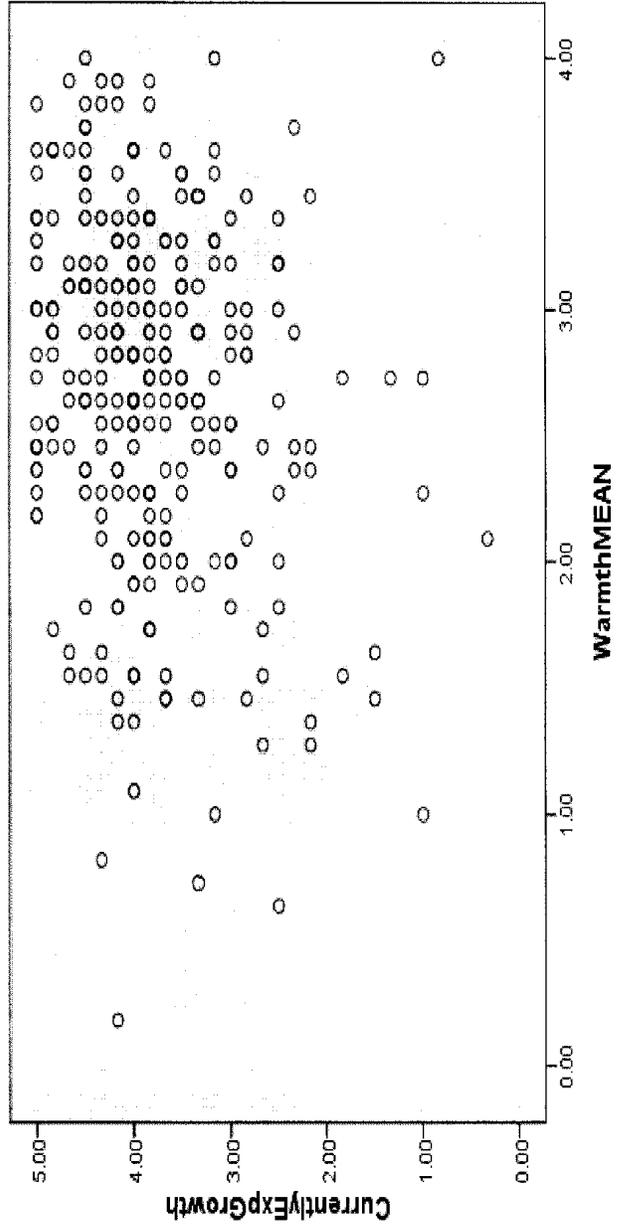
# SCATTERPLOT N

Currently Experienced Growth by Cooperation/Affiliation



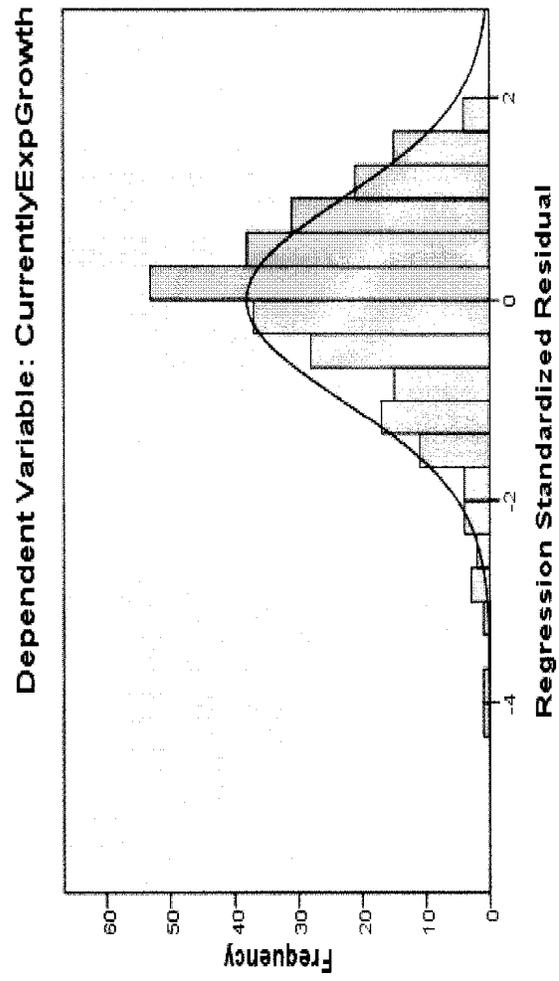
# SCATTERPLOT O

Currently Experienced Growth by Warmth/Affiliation



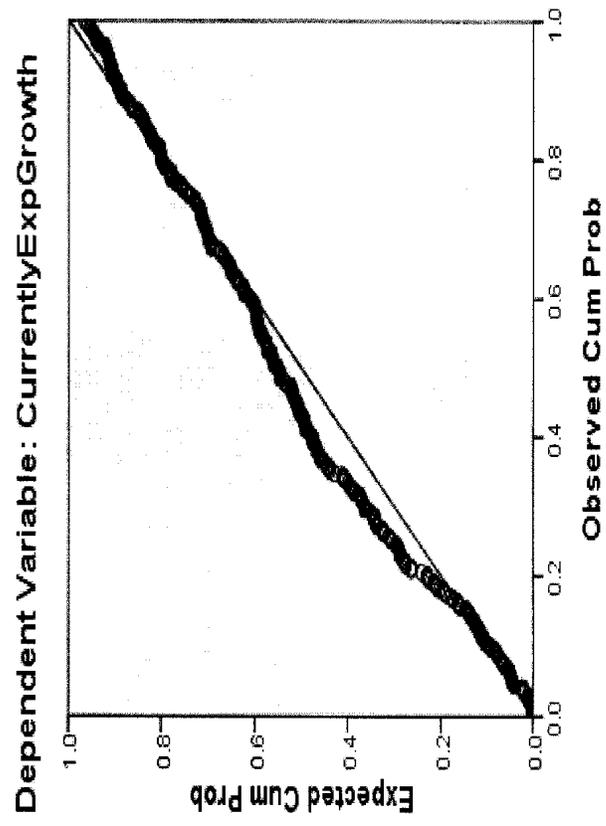
# HISTOGRAM 2b

Histogram



## NORMAL PROBABILITY PLOT 2b

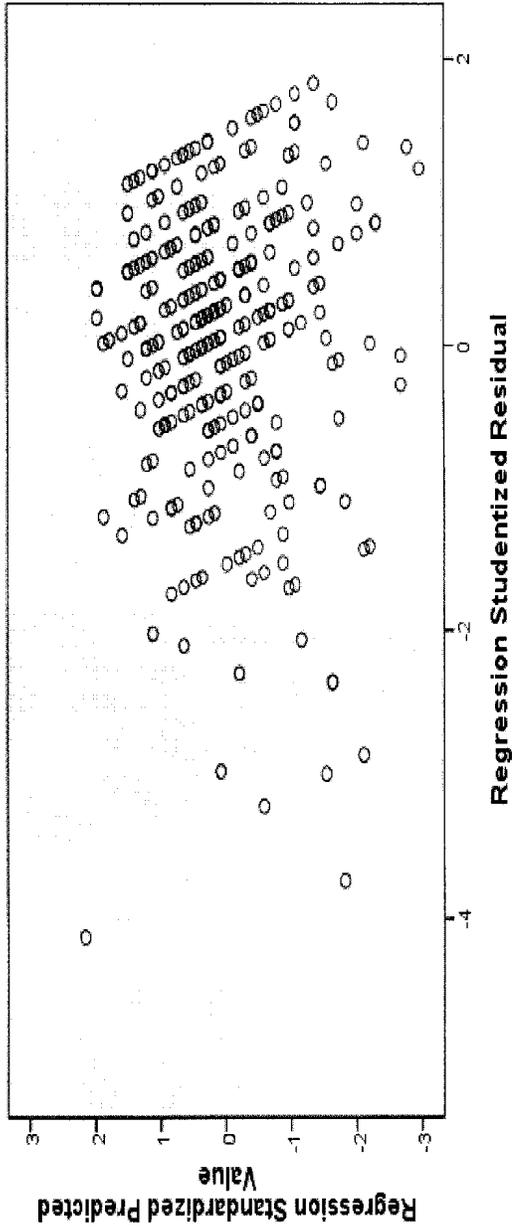
Normal P-P Plot of Regression Standardized Residual



# SCATTERPLOT P

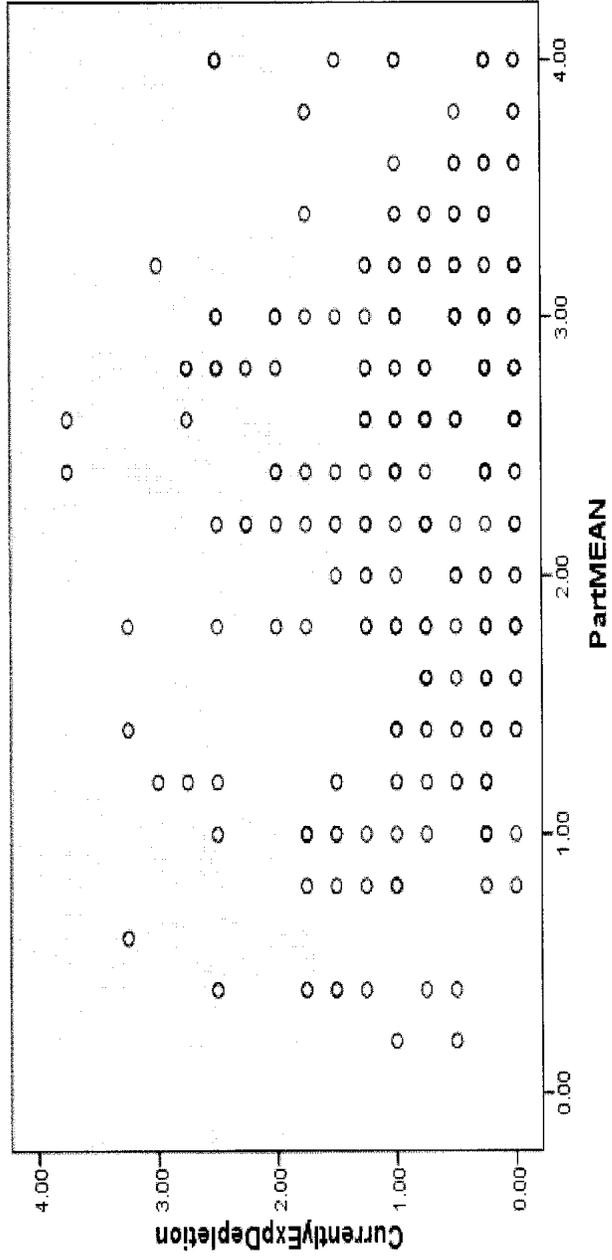
Scatterplot

Dependent Variable: CurrentlyExpGrowth



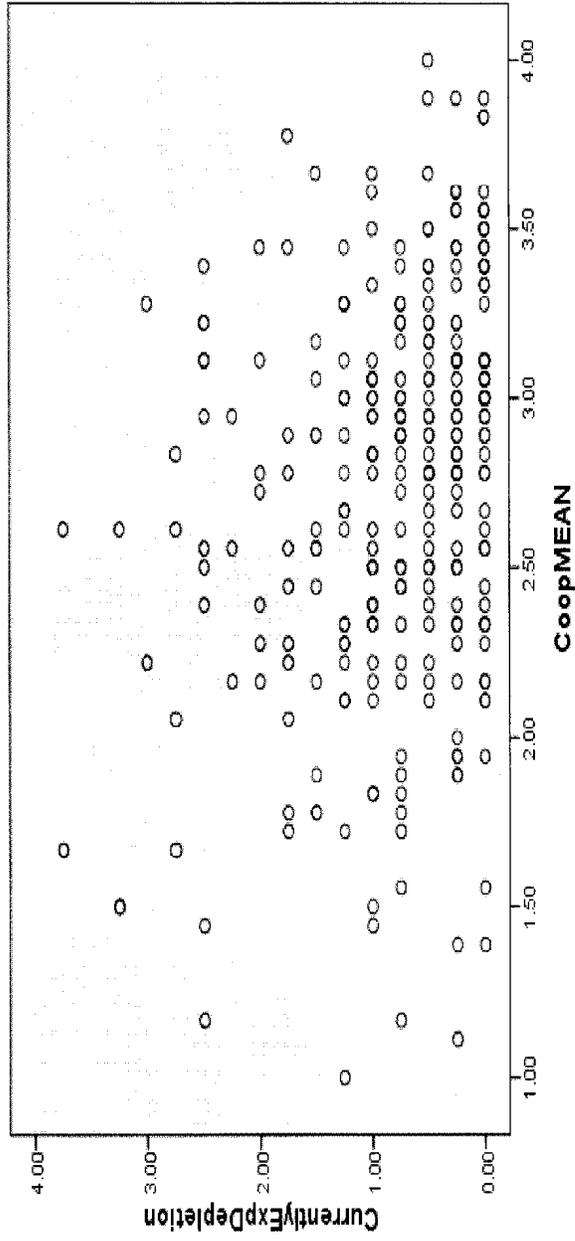
# SCATTERPLOT Q

Currently Experienced Depletion by Participation



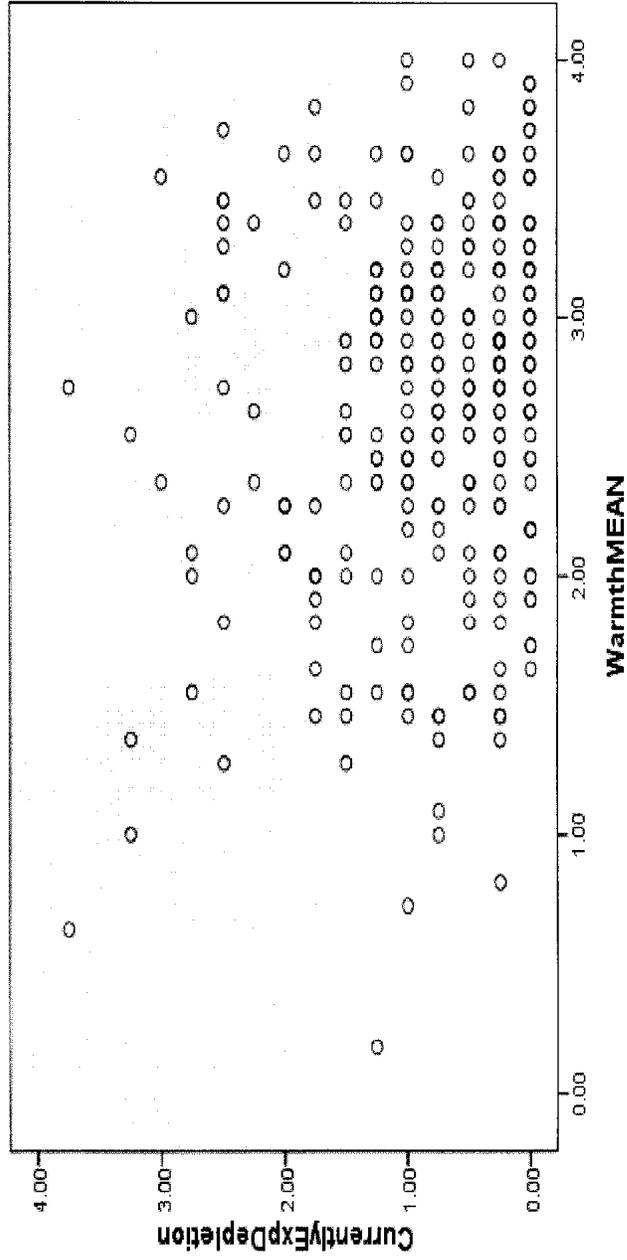
# SCATTERPLOT R

Currently Experienced Depletion by Cooperation/Openness



# SCATTERPLOTS

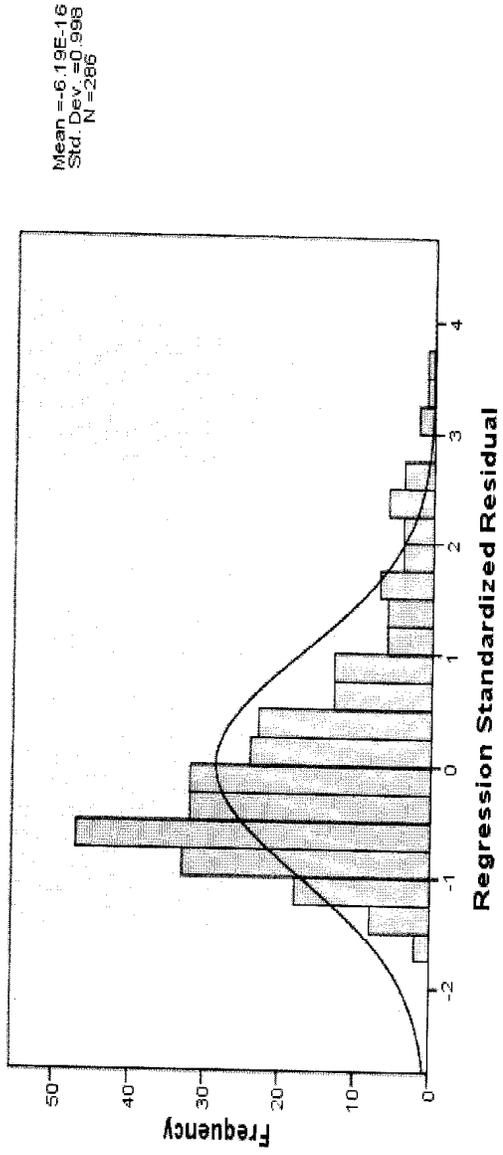
Currently Experienced Depletion by Warmth/Affiliation



# HISTOGRAM 2c

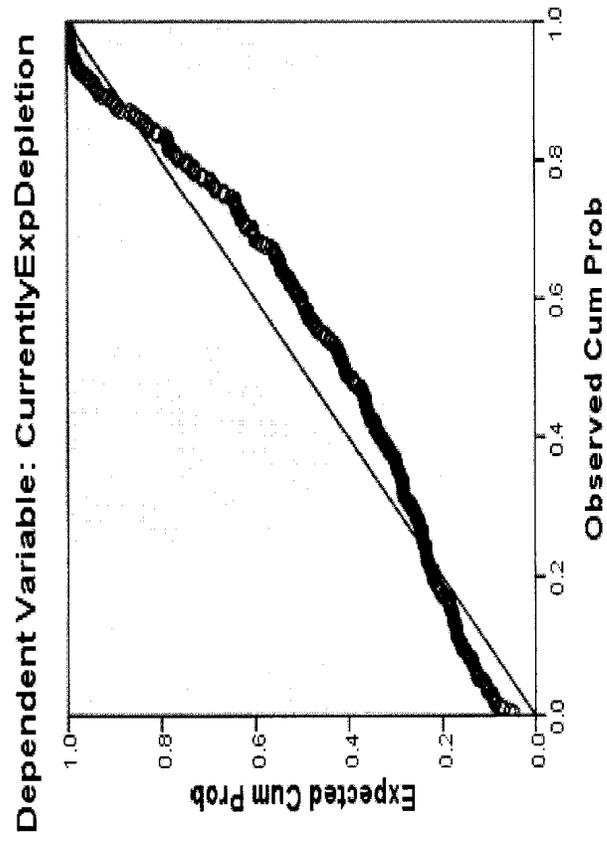
Histogram

Dependent Variable: CurrentlyExpDepletion



## NORMAL PROBABILITY PLOT 2c

Normal P-P Plot of Regression Standardized Residual



# SCATTERPLOT

Scatterplot

